**SNDT Women's University**
**Department of Lifelong Learning and Extension,**
1, Nathibai Thackersey Road,
Mumbai 400020

श्रीमती ना. दा. ठाकरसी महिला विद्यापीठ
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Ref. No.: CE/ E-pathshala/ 2017-18/96

May 23, 2018

# Certificate

This is to certify that Dr.Nasra Shabnam, Assistant Professor, Department of Adult and Continuing Education & Extension, Jamia Millia Islamia, New Delhi-110025, has contributed as subject matter expert for e-content development in the area of Adult Education under e-PG Pathshala project of UGC as per the details given below. The content is for post graduate level programmes. Video shooting for the same was done during July and September 2017.

| Sr. No. | Title of Module/s | Paper title | No. of Modules | Nature of Contribution | | |
|---|---|---|---|---|---|---|
| | | | | e-text | Assessment document | Presenter in Self-learning Video |
| 1. | Historical Perspective of Planning in India | Program Planning and Implementation | 1 | ✓ | ✓ | ✓ |
| 2. | Role of Planning Commission | Program Planning and Implementation | 1 | ✓ | ✓ | ✓ |
| 3. | Process of Developing Five Year Plans in India | Program Planning and Implementation | 1 | ✓ | ✓ | ✓ |
| 4. | Organizational Structure and Process of Planning at Various Levels | Program Planning and Implementation | 1 | ✓ | ✓ | ✓ |

Thus in all Dr.Nasra Shabnam, has contributed total e-text and assessment documents of 04 (Four) modules, has been a presenter in 04 (Four) self-learning videos under this project.

Prof. Satish Kumar Bhati
Paper Coordinator
e-PG Pathshala project of UGC in Adult Education,
Head, Department of Adult and Continuing Education & Extension,
Jamia Millia Islamia, New Delhi-25

V. Chakrabarti
Prof Vandana Chakrabarti
Principal Investigator
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Ref. No.: CE/ E-pathshala/ 2017-18/96 May 23, 2018

## Certificate

This is to certify that Dr. Ashok Kumar, Associate Professor, Department of Adult and Continuing Education & Extension, Jamia Millia Islamia, New Delhi-110025, has contributed as subject matter expert for e-content development in the area of Adult Education under e-PG Pathshala project of UGC as per the details given below. The content is for post graduate level programmes. Video shooting for the same was done during July and September 2017.

| Sr. No. | Title of Module/s | Paper title | Nature of Contribution | | |
|---|---|---|---|---|---|
| | | | e-text | Assessment document | Presenter in Self-learning Video |
| 1. | The Nature and Importance of Extension Program Planning | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 2. | Principles of Program Planning | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 3. | Program Planning Process and its steps | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 4. | People's Participation in Extension Program planning | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 5. | Roles of Extension Agencies, Local Leaders and Institutions in Program Planning | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 6. | Budgeting –Purposes, Types, Process and Zero Base Budgeting | Program Planning and Implementation | ✓ | ✓ | ✓ |

Thus, in all Dr Ashok Kumar has contributed total e-text and assessment documents of 06 (six) modules and has been a presenter in 06 (six) self-learning videos under this project.

Prof. Satish Kumar Bhati
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Department of Continuing & Adult Education & Extension Work
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Ref. No.: CE/ E-pathshala/ 2017-18/ 361

October 26, 2017

## Certificate

This is to certify that Dr. Shikha Kapur Associate Professor, Department of Adult and Continuing Education & Extension, Jamia Millia Islamia, New Delhi-110025, has contributed as subject matter expert in e-PG Pathshala project of UGC in Adult Education as per the details given below. The video shooting for the same was done during July and September 2017.

| Sr. No. | Title of Module/s | Paper title | No. of Modules | Nature of Contribution | | |
|---|---|---|---|---|---|---|
| | | | | Script | Video | Language Editing |
| 1. | Program Planning for Development /Planned Change: concept, importance, types & implications | Program Planning and Implementation | 1 | ✓ | ✓ | |
| 2. | Personality/ Groups/ Organization/Community as Dynamic Systems | Program Planning and Implementation | 1 | ✓ | ✓ | |
| 3. | The process of Planned Change/ Development | Program Planning and Implementation | 1 | ✓ | ✓ | |
| 4. | Theories of Planned Change/ Development | Program Planning and Implementation | 1 | ✓ | ✓ | |
| 5. | Barriers and stimulants to Development/Change including Goals and value dilemma | Program Planning and Implementation | 1 | ✓ | ✓ | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6. | **Governance Structure** | Program Planning and Implementation | 1 | - | ✓ | | |
| 7. | **Historical perspective of Planning in India** | Program Planning and Implementation | 1 | - | - | ✓ | |
| 8. | **Audio Visual Materials: Different Types** | Curriculum and Material Development | 1 | ✓ | ✓ | | |
| 9. | **Print Materials: Different Types** | Curriculum and Material Development | 1 | ✓ | ✓ | | |
| 10. | **Teaching Aids: Non-conventional and Modern** | Curriculum and Material Development | 1 | ✓ | ✓ | | |
| 11. | **Preparation of Books for Neo-literates: Process, Content** | Curriculum and Material Development | 1 | - | ✓ | | |

Thus in all Dr. Shikha Kapur has contributed total 08 (Eight) scripts, 10 (Ten) videos and Language Editing of 1 (One) Module, under this project.

V. Chakrabarti

Prof Vandana Chakrabarti
Principal Investigator, e-PG Pathshala project of UGC in Adult Education,
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May 23, 2018

Ref. No.: CE/ E-pathshala/ 2017-18/96

## Certificate

This is to certify that Dr. Anwara Hashmi, Assistant Professor, Department of Adult and Continuing Education & Extension, Jamia Millia Islamia, New Delhi-110025, has contributed as subject matter expert for e-content development in the area of Adult Education under e-PG Pathshala project of UGC as per the details given below. The content is for post graduate level programmes. Video shooting for the same was done during July and September 2017.

| Sr. No. | Title of Module/s | Paper title | Nature of Contribution | | |
|---|---|---|---|---|---|
| | | | e-text | Assessment document | Presenter in Self-learning Video |
| 1. | Designing the learning | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 2. | Delivery of program | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 3. | Program development as a Social Action Process | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 4. | Supervision and Monitoring | Program Planning and Implementation | ✓ | ✓ | ✓ |
| 5. | Development Communication strategies. | Program Planning and Implementation | - | - | ✓ |
| 6. | Identification of needs and interests | Curriculum and Material Development | - | - | ✓ |

Thus in all Dr. Anwara Hashmi has contributed total e-text and assessment documents of 04 (four) modules and has been a presenter in 6 (six) self-learning videos under this project.

V. Chakrabarti

Prof. Satish Kumar Bhati
Paper Coordinator, e-PG Pathshala project of UGC in Adult Education,
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جامعہ ملیہ اسلامیہ

F.No. AKV/SG/AJKMCRC/'19/

21/08/2019

## TO WHOM IT MAY CONCERN

This is to certify that **Dr. Amit Kumar Verma,** Assistant Professor has been Subject Expert for *B.Sc. Life Science (2nd Year)* course for the Consortium of Educational Communication broadcast on *Vyas channel of CEC-UGC* and on SWAYAM Prabha DTH Channel-5 allotted to Jamia Millia Islamia. Dr. Amit Kumar Verma has written following academic scripts.

1. **Angiosperm: Morphology, Evolution & Diversity (Part-1)**
2. **Angiosperm: Morphology, Evolution & Diversity (Part-2)**
3. **Angiosperm: Morphology, Evolution & Diversity (Part-3)**

I wish him good luck for his future endeavours.

( Prof. Shohini Ghosh )
Director

JAMIA MILLIA ISLAMIA
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**A.J. Kidwai Mass Communication Research Centre**
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F.No. DKD/KSK/AJKMCRC/'17/

21/12/2017

## TO WHOM IT MAY CONCERN

This is to certify that Dr. Devendra Kumar Dhusia, Assistant Professor has been Subject Expert for *B.A. Vocational Studies in (Mass Communication – Video Production)* course for the Consortium of Educational Communication broadcast on *Vyas channel of CEC-UGC* and on SWAYAM Prabha DTH Channel-5 allotted to Jamia Millia Islamia. Dr. D. K. Dhusia is required to write full length video / e-Content scripts in four quadrants on the topics mentioned in the syllabus.

1. **Goods & Services Tax** (GST / VAT)
   {B.A. Vocational Studies in MCVP of Semester-VI, Paper-8}

I wish him good luck for his future endeavours.

( Dr. K. S. Kusuma )
Incharge Program Production

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F.No. DKD/KSK/AJKMCRC/'17/

21/12/2017

## TO WHOM IT MAY CONCERN

This is to certify that Dr. Devendra Kumar Dhusia, Assistant Professor has been Subject Expert for *B.A. Vocational Studies in (Mass Communication – Video Production)* course for the Consortium of Educational Communication broadcast on *Vyas channel of CEC-UGC* and on SWAYAM Prabha DTH Channel-5 allotted to Jamia Millia Islamia. Dr. D. K. Dhusia is required to write full length video / e-Content scripts in four quadrants on the topics mentioned in the syllabus.

1. **Management Information System** (MIS)
   {B.A. Vocational Studies in MCVP of Semester-VI, Paper-8}

I wish him good luck for his future endeavours.

( Dr. K. S. Kusuma )
Incharge Program Production

इग्नू
जन-जन का विश्वविद्यालय

**Indira Gandhi National Open University**
**School of Management Studies**

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THE PEOPLE'S UNIVERSITY

**Date: 31th December 2018**

To,
Dr. D K Dhusia
Department of Commerce
Jamia Milia Islamia, New Delhi

**Subject: Allocation and Writing Unit for the Course BCOS-183: Computer Application in Business**

**Dear Dr. Dhusia,**

Thank you very much for participating in Expert cum course writers committee meeting for the design and development of curriculum for the course "Computer Application in Business" held on 31st August 2018 at Conference Room Block-C, SOMS. We sincerely appreciate your active participation and valuable suggestions at that juncture.

As decided in the meeting you are requested to write two new units of the Block -1. The following Unit which has been allocated for writing is enclosed herewith along with the sample SLM copy. The unit must be in IGNOU's SLM format and equipped with self motivating, self evaluating and learner friendly approach. You are requested to include illustrations examples diagram activities etc. extensively to explain the content. Since the learner has a Pan India presence hence the content should be written in simple language. The payment for writing the particular unit will be as per the university norms.

**BLOCK-1: Fundamentals of Computers**

| Unit-3 Basics of Computer Software | Unit-4: Web - Applications |
|---|---|
| 3.0 Objectives | 4.0 Objectives |
| 3.1 Introduction | 4.1 Introduction |
| 3.2 Software and its types | 4.2 Web Browser |
| 3.2.1 System Software | 4.3 Google Drive |
| 3.2.2 Application Software | 4.3.1 What is Google Docs? |
| 3.2.3 Google Chrome | 4.3.2 File storage and synchronization service |
| 3.2.4 App Based Software | 4.3.3 Setting up a Google account |
| 3.3 Windows Operating System | 4.3.4 Navigating Google Docs |
| 3.4 Android Operating system for Mobile | 4.3.5 Creating new Google Docs projects |
| 3.5 Free and open Software | 4.3.6 Google Sheets |
| 3.6 Google Play store | 4.3.7 Google Slides |
| 3.7 Let us Sum up | 4.3.8 Google office suite |
| 3.8 Keywords | 4.3.9 Sharing, publishing, collaborating |
| 3.9 Answer to check your Progress | 4.3.10 How to make Google Forms |
| 3.10 Terminal Questions | 4.4 Cloud base system |
| 3.11 Further Readings | 4.5 Let us Sum up |
| | 4.6 Keywords |
| | 4.7 Answer to check your Progress |
| | 4.8 Terminal Questions |
| | 4.9 Further Readings |

You are requested to kindly do the needful and submit the same in one month's time. Looking forward to hear and appreciate the line of confirmation.

With regards,

डॉ. सुबोध केसरवानी / Dr. Subodh Kesharwani
एसोसिएट प्रोफेसर / Associate Professor
प्रबंध अध्ययन विद्यापीठ / School of Management Studies
इ.गाँ.रा.मु.वि., मैदान गढ़ी, नई दिल्ली-110068
IGNOU, Maidan Garhi, New Delhi-110068

(Dr. Subodh Kesharwani)
Associate Professor & Course Coordinator
BCOS-183 Computer Application in Business
B.Com (CBCS) Programme (M: 8010224545)

**SCRIPT**

**(6 –A: working capital & 6-B: importance of working capital management**

**Hello friends**

**We are going to discuss about the elements of working capital and importance of working capital management in this program**

**Working capital management is one of the key functions of Financial Management.** Financial management is concerned with the efficient use of important economic resources, namely, capital. The capital can be used to invest in two forms i.e Fixed assets and Current Assets.

**Fixed assets** are major portion of the capital funds used for investing in purchase of fixed assets for permanent or long-term purposes, for the purpose of diversification, expansion of business, renovation or modernization of plant and machinery and research and development and

**Current assets** are the portion of funds needed for short-term purposes like investing into assets for current operations of business is called working capital. For example, one who is managing a trading business has to arrange funds regularly for, purchase of finished stock and keeping it in storeroom, and also find suitable customer to go for sales. On the other hand if it is a manufacturing firm he has to arrange for funds continuously for, buying raw materials, keeping it for some time in store, then taking it for the process of converting into finished goods, and ultimately selling it to consumers.

The subject experts of this program are Dr. Naseeb Ahmad and Dr. Asheref Illiyan. **Dr. Naseeb Ahmad** is Honorary Deputy Director, Centre for Innovation & Entrepreneurship & Associate Professor, Department of Commerce and Business Studies, Jamia Millia Islamia (Central University), New Delhi. He is having experience of about 17 years as a teacher and researcher in the area of Entrepreneurship & Finance. He has organised more than 50 Entrepreneurship Development Programs, workshops, seminars, events in the area of Innovation & Entrepreneurship.

**Dr. Asheref Illiyan is a Senior Assistant Professor in Department of Economics**
Jamia Millia Islamia, having teaching experience of more than 15 years. He has published several books and research papers and have organised several National & International conferences, seminars etc.

**Let us start with a question:**

**Why should entrepreneur know about working capital management?**
In a business organization, we find that most of the time entrepreneurs are concerned with various issues related to working capital management.
**They are worried whether there is :**

- enough cash available to pay bills;
- enough inventory exists to make and sell products;
- any excess cash is invested in interest-bearing securities;
- accounts receivable are at a level that maximizes earnings,

- Short-term liabilities such as salaries payable and trade credit are used efficiently and at the lowest cost possible.

**Now let us understand What is Working capital management?**

Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The basic goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. The management of working capital involves managing inventories, accounts receivable, accounts payable and cash

There is a trade-off between the risk of having too little working capital on hand and the reduced profitability that results from having excess working capital.

We can understand working capital in two different but interlinked senses. In the first sense, working capital refers to **gross working capital** and in second sense it is understood in terms of **net working capital.**

- **GROSS WORKING CAPITAL:** It refers to the firm's investment in current assets. Current assets are the assets, which can be converted into cash within an accounting year or within an operating cycle. You can include here cash, short-term securities, debtors (accounts receivable & book debts), bills receivable and stock.
- **NET WORKING CAPITAL: T**he net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsider, which are expected to mature or payment within an accounting year & include creditors, bills payable & the outstanding expenses. In other words you can say that this is the excess of current assets over current liabilities.

**Now let us understand what Current Assets & Current Liabilities are**

**What are Current Assets?**
Assets, which can normally be converted into cash within a year or within the operating cycle, are grouped as current assets. In other words, current assets are resources that are in cash or will soon be converted into cash in 'the ordinary course of business'.

**CURRENT ASSETS** constitute the following:

- **Inventories:** Inventories represent raw materials and components, work-in-progress and finished goods.
- **Trade Debtors:** Trade Debtors comprise credit sales to customers.
- **Prepaid Expenses:** These are those expenses, which have been paid for goods and services whose benefits have yet to be received.
- **Loan and Advances:** They represent loans and advances given by the firm to other firms for a short period of time.
- **Investment:** . Investment held in the form of money market instrument like, Treasury bills, commercial bill, and commercial paper and gilt edged securities.
- .
- **Cash and Bank Balance:** These assets represent cash in hand and at bank, which are used for meeting operational requirements. One thing you can see here is that this current asset is purely liquid but non-productive.

**What are Current Liabilities?**

Liabilities, which are due for payment in the short-run, are classified as current liabilities. In other words, these liabilities are due within the accounting period or the operating cycle of the business. Most of such liabilities are incurred in the acquisition of materials or services forming part of the current assets. Current liabilities are commitments, which will soon require cash settlement in 'the ordinary course of business'.

**Current Liabilities** comprise the following:

- **Sundry Creditors:** These liabilities stem out of purchase of raw materials on credit terms usually for a period of one to two months.
- **Bank Overdrafts:** These include withdrawals in excess of credit balance standing in the firm's current accounts with banks
- **Short-term Loans:** Short-terms borrowings by the firm from banks and others form part of current liabilities as short-term loans.
- **Provisions:** These include provisions for taxation, proposed dividends and contingencies
- Advance received from customers.
- Interest, tax, dividend, salary and wages payable.
- Statutory liabilities like ESI, PPF, Co-op dues, sales tax, Excise duty etc.

**Now let us discuss Type/ Kinds of Working Capital**

There are 2 types of working capital

1. **Permanent working capital**: This component represents the value of the current assets required on a continuing basis over the entire year, and for several years. Permanent working capital is the minimum amount of current assets, which is needed to conduct a business even during the dullest season of the year.

2. **Temporary working capital**: Contrary to the above you will find that temporary working capital represents a certain amount of fluctuations in the total current assets during a short period. These fluctuations are increased or decreased and are generally cyclical in nature. Additional current assets are required at different times during the operating year. Variable working capital is the amount of additional current asset that are required to meet the seasonal needs of a firm, so is also called as the seasonal working capital.

**Now let us discuss about the various components of Working Capital Management**

Working capital management comprises of managing the 3 major components of working capital i.e.;

1. **Inventory management**
2. **Receivables management and**
3. **Cash management**

Let us discuss these 3 components in detail

1. **Inventory management:** Inventories are stock of the product a company is manufacturing for sale and components that make up the product. Various forms in which inventories exist in a manufacturing company are: raw materials, work-in-process and finished goods.
   - Raw materials are those basic inputs that are converted into finished product through the manufacturing process. Thus, raw materials inventories are those units, which have been purchased and stored for future production.

- Work-in-process inventories are semi-manufactured products. They represent products that need more work before they become finished products for sale.
- Finished goods inventories are those completely manufactured products, which are ready for sale. Stocks of raw materials and work-in-process facilitate production, while stock of finished goods is required for smooth marketing operations. Thus, inventories serve as a link between the production and consumption of goods.

**Now the question that arises is, why at all do we need to hold inventory? Do you have any idea?**

The question of managing inventories arises only when the company holds inventories.
Maintaining inventories involves tying up of the company's funds and incurrence of storage and handling costs.
If it is expensive to maintain inventories, have you ever wondered why companies hold inventories.
There are **three** general motives for holding inventories:

- **Transactions motive** emphasizes the need to maintain inventories to facilitate smooth production and sales operations. For uninterrupted and proper running of any firm it is necessary to have an appropriate level of inventory.
- **Precautionary motive** necessitates holding of inventories to guard against the risk of unpredictable changes in demand and supply forces and other factors.
- **Speculative motive** influences the decision to increase or reduce inventory levels to take advantage of price fluctuations.

**NOW LET US DISCUSS THE OBJECTIVES OF INVENTORY MANAGEMENT**

No activity is undertaken without some aim/objective. Let's now come to the objectives of inventory management.
In the context of inventory management, the firm is faced with the problem of meeting two conflicting needs:

- To maintain a large size of inventory for efficient and smooth production and sales operations.
- To maintain a minimum investment in inventories to maximize profitability because idle blocking of funds earn nothing.

As we discussed earlier, both excessive and inadequate inventories are not desirable. These are two danger points within which the firm should operate. The objective of inventory management should be to determine and maintain optimum level of inventory investment. The optimum level of inventory will lie between the two danger points of excessive and inadequate inventories.
Firms should always avoid a situation of over investment or under-investment in inventories.
The major dangers of over investment in inventories are:

(a) Unnecessary tie-up of the firm's funds and loss of profit,
(b) Excessive carrying costs, and
(c) Risk of liquidity.

On the other hand the consequences of underinvestment in inventories are:
(a) Production hold-ups and
(b) Failure to meet delivery commitments. Inadequate raw materials and work-in-process inventories will result in frequent production interruptions.

As you can gather from our discussion, inventory management to be effective should:

- Ensure a continuous supply of raw materials to facilitate uninterrupted production,
- Maintain sufficient stocks of raw materials in periods of short supply and anticipate price changes,
- Maintain sufficient finished goods inventory for smooth sales operation, and efficient customer service,
- Minimise the carrying cost and time, and
- Control investment in inventories and keep it at an optimum level.

**Now let us discuss about the second component of working capital i.e. Receivables management**

One of the very important components of working capital is receivables. We know that business firms generally sell goods on credit, to facilitate sale especially from those customers who cannot borrow from other sources, or find it very expensive or difficult to do so. For the existence of firm it is essential to sell on credit. Finished goods sold on credit get converted into receivables (book debts) which when realized generate cash.

Since receivable often account for a significant proportion of the total assets, management of receivables takes up a lot of the Finance Manager's time. Can you all tell me why should a firm in a first instance sell goods on credit or what is the purpose of Receivables?

The purpose of receivables can be understood if we can grasp the basic objective of receivables management. The objective of receivables management is to promote sales and profits until that point is reached where the returns that the company gets from funding of receivable is less than the cost that the company has to incur in order to fund these receivables. Hence, the purpose of receivables is less than the cost that the company has to incur in order to fund these receivables. Hence, the purpose of receivables is directly connected with the company's objectives of making credit sales, which are:

- Increasing total sales as, if a company sells goods on credit, it will be in a position to sell more goods than if it insists on immediate cash payment.

- Increasing profits as a result of increase in sales not only in volume, but also because companies charge a higher margin of profit on credit sales as compared to cash sales.

- In order to meet increasing competition, the company may have to grant better credit facilities than those offered by its competitors.

**Now let us discuss the Third component of Working capital management i.e. CASH MANAGEMENT**

Cash is the most liquid asset of all and is vital for existence of any business firm. Its efficient management is crucial to the solvency of the business because cash is the focal point of the funds flows in a business. It can be understood in two senses, one is actual cash held by firm and deposits withdraw able on demand, and in another sense it includes marketable securities, which can be convertible into cash immediately.

The goal of cash management is to reduce the amount of cash that is being used within the firm so as to increase profitability, but without reducing business activities or exposing the firm to undue risk in its financial obligations.

Cash flows in connection with credit serve to introduce the concept of FLOAT which is the time lag or delay between the moment of disbursement of funds on the part of the customer and the moment of receipt of funds on the part of the seller (i.e., mail time, processing time, and clearing time with the banking system).

**What factors must be considered when deciding on the appropriate amount of cash to hold?**

Cash in checking accounts must be held so that bills are paid on time (transactions balance), for emergencies such as strikes, weather disruptions, etc. (Precautionary balance), bank requirements for loans or other services provided (Compensating balance), and for taking advantage of bargains (speculative balance).

**There are 4 Motives for holding cash :**

1. **The transaction motive:** Firms are in existence to create products or provide services. The providing of services and creating of products results in the need for cash inflows and outflows. Firms hold cash in order to satisfy the cash inflow and cash outflow needs that they have.
2. **The precautionary motive**: Holding cash as a precaution serves as an emergency fund for a firm. If expected cash inflows are not received as expected cash held on a precautionary basis could be used to satisfy short-term obligations that the cash inflow may have been bench marked for**.**
3. **Compensating motive:** Banks provide a variety of services to business firms, such as clearance of cheque, supply of credit…etc., for which a minimum balance is required to be kept with the bank, this balance is to compensate banks for services rendered.
4. **The speculative motive**: Economist Keynes described this reason for holding cash as creating the ability for a firm to take advantage of special opportunities that if acted upon quickly will favor the firm. An example of this would be purchasing extra inventory at a discount that is greater than the carrying costs of holding the inventory.

**Cash management is concerned with the managing :**

1. Cash flows into & out of the firm,
2. Cash flows within the firm
3. Cash balances held by the firm at a point of time by financing deficit or investing surplus cash.

## b) Importance of Working Capital Management

At times, business needs to estimate the requirement of working capital in advance for proper control and management. The factors discussed above influence the quantum of working capital in the business. The assessment of working capital requirement is made keeping these factors in view. Each constituent of working capital retains its form for a certain period and that holding period is determined by the factors discussed above. So for correct assessment of the working capital requirement, the duration at various stages of the working capital cycle is estimated. Thereafter, proper value is assigned to the respective current assets, depending on its level of completion. The basis for assigning value to each component is given here/below:

| **Component of working capital** | **Basis of valuation** |
|---|---|
| (i) Stock of raw material | Purchase cost of raw materials |
| (ii) Stock of work in process | At cost or market value, whichever is lower |
| (iii) Stock of finished goods | Cost of production |
| (iv) Debtors | Cost of sales or sales value |
| (v) Cash | Working expenses |

Each constituent of the working capital is valued on the basis of valuation enumerated above for the holding period estimated. The total of all such valuation becomes the total estimated working capital requirement. The assessment of the working capital should be accurate even in the case of small and micro enterprises where business operation is not very large. We know that working capital has a very close relationship with day-to-day operations of a business. Negligence in proper assessment of the working capital, therefore, can affect the day-to-day operations severely. It may lead to cash crisis and ultimately to liquidation. An inaccurate assessment of the working capital may cause either under-assessment or over assessment of the working capital and both of them are dangerous.

**CONSEQUENCES OF UNDERASSESSMENT OF WORKING CAPITAL**

- Growth may be stunted. It may become difficult for the enterprise to undertake profitable projects due to non-availability of working capital.
- Implementation of operating plans may become difficult and consequently the profit goals may not be achieved.
- Cash crisis may emerge due to paucity of working funds.
- Optimum capacity utilization of fixed assets may not be achieved due to non availability of the working capital.
- The business may fail to honour its commitment in time, thereby adversely affecting its credibility. This situation may lead to business closure.
- The business may be compelled to buy raw materials on credit and sell finished goods on cash. In the process it may end up with increasing cost of purchases and reducing selling prices by offering discounts. Both these situations would affect profitability adversely.
- Non-availability of stocks due to non-availability of funds may result in production stoppage.
- While underassessment of working capital has disastrous implications on business,

Over assessment of working capital also has its own dangers.

**CONSEQUENCES OF OVERASSESSMENT OF WORKING CAPITAL**

Excess of working capital may result in unnecessary accumulation of inventories.

- It may lead to offer too liberal credit terms to buyers and very poor recovery system and cash management.
- It may make management complacent leading to its inefficiency.

Over-investment in working capital makes capital less productive and may reduce return on investment.

Working capital is very essential for success of a business and, therefore, needs efficient management and control. Each of the components of the working capital needs proper management to optimize profit.

**Now let us see the factors that affect working capital requirements in a business firm**

There are no uniform rules or formulae to determine the working capital requirements in a firm. A firm should not plan its working capital neither too much nor too low. If it is too high it will affect profits. On the other hand if it is too low, it will have liquidity problems. The total working capital requirements is determined by a wide variety of factors. They also vary from time to time.
Among the various factors, the following are necessary.

**1. Nature of business:**

The working capital requirements of an organization are basically influenced by the nature of its business. The trading and financial institutions require more working capital rather than fixed assets because these firms usually keep more varieties of stock to satisfy the varied demands of their customers.
The public utility service organisations require more fixed assets rather than working capital because they have cash sales only and they supply only services and not products. Thus, the amounts tied up with stock and debtors are almost nil. Generally, manufacturing business needs, more fixed assets rather than working capital. Further, the working capital requirements also depend on the seasonal products.

**2. Size of the business:** Another important factor is the size of the business. Size of the business means scale of operation. If the operation is on a large scale, it will need more working capital than a firm that has a small-scale operation. Manufacturing

**3. Credit Terms:** The level of working capital is also determined by credit terms, which is granted to customers as well as available from its creditors. More credit period allowed to debtors will result in high book debts, which leads to high working capital and more bad debts. On the other hand liberal credit terms available from creditors will lead to less working capital.

**4. Operating/ Manufacturing cycle**:
The length of manufacturing cycle influences the quantum of working capital needed. Manufacturing process always involves a time lag between the time when raw materials are fed into the production line and finished goods are finally turned out by it. The length of the period of manufacture in turn depends on the nature of product as well as production technology used by a concern. Shorter the manufacturing cycle; lesser the working capital required.
The time period of operating cycle can be calculated with the following equation

$O = (R+W+F+D) - C$
Where O = Duration of operating cycle
R = Raw material average storage period
W = Average period of work-in-progress
F = Finished goods average storage period
D = Debtors Collection period
C = Creditors payment period

**5. Speed of turnover**:

If the inventory turnover is high, the working capital requirements will be low. With a better inventory control, a firm is able to reduce its working capital requirements. When a firm has to carry on a large slow moving stock, it needs a larger working capital as against another whose turnover is rapid. A firm should determine the minimum level of stock, which it will have to maintain throughout the period of its operation.

**6. Seasonality of operation**:
Firms, which have marked seasonality in their operations usually, have highly fluctuating working requirements. Let us take an example to illustrate this point. Consider a firm manufacturing Air Conditioners (AC). The sale of AC reaches a peak during the summer months and drops sharply during the winter period. The working capital need of such a firm is likely to increase considerably in summer months and decrease significantly during winter season.
**7. Business cycle:**
Cyclical changes in the economy also influence quantum of working capital. In a period of boom i.e., when the business ism prosperous, there is s need of larger amount of working capital due to increases in sales, rise in price etc and vice-a-versa during period of depression.

8. **Dividend policy**:
It has a dominant influence on the working capital position of a firm. If the firm is following a conservative dividend policy, the need for working capital can be met with retained earnings.
9. **Production policy:** The requirements of working capital are also determined by production policy. When the demand for the product is seasonal, inventory must be accumulated during the off-season period and this leads to more cost and risks. These firms, which manufacture variety of goods, will have advantages of keeping low working capital by adjusting the production according to season.
10. **Growth and Expansion:** As a company grows and expands logically, it requires a larger amount of working capital. Other things remaining same, growing industries need more working capital than those that are static.

# 6. (A) ELEMENTS OF WORKING CAPITAL MANAGEMENT

# 6. (B) IMPORTANCE OF WORKING CAPITAL MANAGEMENT

**SUMMARY**

Working capital management, one of the key functions of Financial Management is concerned with the efficient use of capital. The capital can be used to invest in two forms i.e Fixed assets and Current Assets.

Fixed assets are major portion of the capital funds used for investing in purchase of fixed assets for permanent or long-term purposes, for the purpose of diversification, expansion of business, renovation or modernization of plant and machinery and research and development whereas the Current assets are the portion of funds needed for short-term purposes like investing into assets for current operations of business and meeting day to day fund requirements for various operational and routine expenses. For example, one who is managing a trading business has to arrange funds regularly for, purchase of finished stock and keeping it in storeroom, and also find suitable customer to go for sales. On the other hand if it is a manufacturing firm he has to arrange for funds continuously for, buying raw materials, keeping it for some time in store, then taking it for the process of converting into finished goods, and ultimately selling it to consumers.

**OBJECTIVES**

*This module will help the students to:*

- Understand the concept of Current Assets & Current Liabilities
- Discuss the concept of working capital
- Comprehend the various components of Working Capital Management
- Recognize the factors that affect working capital requirements
- Understand the Importance of Working Capital Management

## Frequently Asked Questions

1. **What is Working capital management?**
   Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The basic goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. The management of working capital involves managing inventories, accounts receivable, accounts payable and cash

2. **What are Current Assets & Current Liabilities?**

   Current Assets are assets, which can normally be converted into cash within a year or within the operating cycle, are grouped as current assets. In other words, current assets are resources that are in cash or will soon be converted into cash in 'the ordinary course of business.
   Current liabilities are the liabilities, which are due for payment in the short-run i.e. within the accounting period or the operating cycle of the business. Most of such liabilities are incurred in the acquisition of materials or services forming part of the current assets.

3. **What are the various components of Current Assets?**
   Current assets constitute the following:
   Inventories
   Trade Debtors
   Prepaid Expenses
   Loan and Advances
   Investment
   Cash and Bank Balance

4. **What are the items of Current Liabilities?**
   Current Liabilities comprise the following:
   Sundry Creditors
   Bank Overdrafts
   Short-term Loans
   Provisions
   Advance received from customers.
   Interest, tax, dividend, salary and wages payable.
   Statutory liabilities like ESI, PPF, Co-op dues, sales tax, Excise duty etc.

5. **What is the difference between Gross working capital and Net working capital?**

   Gross working capital refers to the firm's total investment in current assets. Current assets are the assets, which can be converted into cash within an accounting year or within an operating cycle. The net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsider, which are expected to be paid within an accounting year, it include creditors, bills payable & the outstanding expenses. In other words this is the excess of current assets over current liabilities.

6. **What are the different type/ Kinds of Working Capital?**

   There are 2 types of working capital i.e. Permanent working capital, and Temporary working capital. Permanent working capital represents the value of the current assets required on a continuing basis over the entire year, and for several years. It is the minimum amount of current assets, needed to conduct a business even during the dullest season of the year.

   Temporary working capital represents a certain amount of fluctuations in the total current assets during a short period. These fluctuations are increased or decreased and are generally cyclical in nature. Additional current assets are required at different times during the operating year.

7. **What are motives for holding inventories?**

   There are **three** general motives for holding inventories:

   - **Transactions motive:** emphasizes the need to maintain inventories to facilitate smooth production and sales operations.
   - **Precautionary motive** necessitates holding of inventories to guard against the risk of unpredictable changes in demand and supply forces and other factors.
   - **Speculative motive** influences the decision to increase or reduce inventory levels to take advantage of price fluctuations.

8. **What are the consequences of underassessment of working capital?**

- Growth may be stunted and it may become difficult for the enterprise to undertake profitable projects
- Implementation of operating plans may become difficult
- Cash crisis may emerge due to paucity of working funds.
- Optimum capacity utilization of fixed assets may not be achieved due to non availability of the working capital.
- The business may fail to honour its commitment in time, thereby adversely affecting its credibility.
- Non-availability of stocks due to non-availability of funds may result in production stoppage.

9. **What factors affect working capital requirements in a business firm?**

The total working capital requirements is determined by a wide variety of factors. Among the various factors, the following are necessary.

a) Nature of business
b) Size of the business
c) Credit Terms
d) Operating/ Manufacturing cycle
e) Speed of turnover
f) Seasonality of operation
g) Business cycle
h) Dividend policy
i) Production policy
j) Growth and Expansion

**QUIZ**

**True or False :**

1. Inventory management weighs the costs of carrying inventory against lost sales.

(a) **True**

(b) False

2. It is generally better to have lower accounts receivable and inventory levels than to have higher levels.

(a) **True**

(b)False

3. Providing credit to customers will automatically increase total sales and net income.

(a) True

**(b) False**

4. A collection call is one method of keeping track of a customer's situation.

**(a) True**

(b) False

**Multiple Choice:**

1. _______________ refers to the amount invested in various components of current assets.

a) Temporary working capital
b) Net working capital
**c) Gross working capital**
d) Permanent working capital

2. _______________ refers to a firm holding some cash to meet its routine expenses that are incurred in the ordinary course of business.

a) Speculative motive
**b) Transaction motive**
c) Precautionary motive
d) Compensating motive

3. _______________ refers to the length of time allowed by a firm for its customers to make payment for their purchases.

a) Holding period
b) Pay-back period

c) Average collection period
**d) Credit period**

4. Amounts due from customers when goods are sold on credit are called ____________.

a) Trade balance
**b) Trade debits**
c) Trade discount
d) Trade off

5. Which one of the following would NOT tighten a firm's credit policy?

(a) Implementing a more stringent credit standard

(b) Shortening the net due period

**(c) Lengthening the discount period**

(d) Requiring a cash down payment on any purchase

6. Which one of the following would help reduce the amount of accounts receivable delinquencies?

(a) easing the credit approval process

**(b) know your customers situation**

(c) refuse to extend payments

(d) stop sending reminder letters

**GLOSSARY**

**Assets** : things of value owned by a business. An asset may be a physical property such as a building, or an object such as a stock, or it may be a right, such as the right to use a patented process.

**Current Assets** : Assets, which can normally be converted into cash within a year or within the operating cycle, are grouped as current assets. In other words, current assets are resources that are in cash or will soon be converted into cash in 'the ordinary course of business'.

**Current Liabilities:** Liabilities, which are due for payment in the short-run, are classified as current liabilities. In other words, these liabilities are due within the accounting period or the operating cycle of the business. Most of such liabilities are incurred in the acquisition of materials or services forming part of the current assets. Current liabilities are commitments, which will soon require cash settlement in 'the ordinary course of business'.

**Fixed Assets**: It cannot be quickly turned into cash without interfering with business operations. Fixed assets include land, buildings, machinery, equipment, furniture, and long-term investments.

**Working capital management**: It involves the relationship between a firm's short-term assets and its short-term liabilities. The basic goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. The management of working capital involves managing inventories, accounts receivable, accounts payable and cash

**Gross working capital:** It refers to the firm's total investment in current assets. Current assets are the assets, which can be converted into cash within an accounting year or within an operating cycle. You can include here cash, short-term securities, debtors (accounts receivable & book debts), bills receivable and stock.

**Net working capital: T**he net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsider, which are expected to mature or payment within an accounting year & include creditors, bills payable & the outstanding expenses. In other words you can say that this is the excess of current assets over current liabilities.

**Permanent working capital**: It represents the value of the current assets required on a continuing basis over the entire year, and for several years. It is the minimum amount of current assets, which is needed to conduct a business even during the dullest season of the year.

**Temporary working capital**: It represents a certain amount of fluctuations in the total current assets during a short period. These fluctuations are increased or decreased and are generally cyclical in nature. Additional current assets are required at different times during the operating year. Variable working capital is the amount of additional current asset that are required to meet the seasonal needs of a firm, so is also called as the seasonal working capital.

**Inventory:** Inventories are stock of the product a company is manufacturing for sale and components that make up the product. Various forms in which inventories exist in a manufacturing company are: raw materials, work-in-process and finished goods.

**Transactions motive** emphasizes the need to maintain inventories to facilitate smooth production and sales operations. For uninterrupted and proper running of any firm it is necessary to have an appropriate level of inventory.
**Precautionary motive** necessitates holding of inventories to guard against the risk of unpredictable changes in demand and supply forces and other factors.
**Speculative motive** influences the decision to increase or reduce inventory levels to take advantage of price fluctuations.

**Cash management:** Cash is the most liquid asset of all and is vital for existence of any business firm. Its efficient management is crucial to the solvency of the business. It can be understood in two senses, one is actual cash held by firm and deposits withdraw able on demand, and in another sense it includes marketable securities, which can be convertible into cash immediately.

**ASSIGNMENT**

1. Define working capital
2. Explain current assets and current liabilities
3. Distinguish between gross working capital and net working capital
4. Discuss various objectives of holding inventory
5. Distinguish between permanent working capital and temporary working capital
6. Explain various motives of holding cash
7. Discuss the consequences of over assessment and underassessment of working capital

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## SCRIPT- 8 (a): Difference between Price and Cost

***Hello friends!***

*In this program we are going to discuss about two very critical issues for an entrepreneur i.e. Price & Cost. The profit of a business depends on cost and price and hence all the business activities are undertaken keeping in view the cost of product/ service and its price*

Price is the amount of money paid by the buyer to the seller in exchange for any product and service. The amount charged by the seller for a product is known as its price, which includes cost and the profit margin. For example- If you buy a product for Rs 500, then it is the price of that product.

Cost is the amount incurred on the inputs like land, labour, capital, enterprise, etc. for producing any product. It is the amount of money spent by the company in the manufacturing of a product. For example- If a company manufactures shoes, then the expenses incurred on raw materials, salaries, rent, interest, taxes, duties, etc. determines the cost of the product.

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**Let's explore, What is Price?**

Ancient philosophers recognized the importance of price in an economic system. Price continues to serve as a means of regulating economic activity. All the four factors of production, viz. natural resources, capital, human resources and entrepreneurship, depends on the prices that those factors receive. An individual firm's prices and the resulting purchases by its customers determine how much revenue the firm receives. Prices, therefore, influence a firm's profits as well as its employment of the factors of production. Traditionally, price has operated as the major determinant of buyer choice.

A price is an expression of value and it is the seller's estimate of what all of this is worth to potential buyers, recognizing the other options buyers will have for filling the need the product is intended to satisfy. To the extent that the product or service finds markets and is profitable at given price levels, it provides a viable economic base for building and maintaining a business. In the competitive marketplace, pricing is a game.

The struggle for market share focuses critically on price. Pricing strategies of competing firms, therefore, are highly interdependent. The price one competitor sets is a function not only of what the market will pay but also of what other firms charge. Prices set by individual firms respond to those of competitors; they also are intended often to influence competitors' pricing behaviour. A way to think about making a pricing decision is that price should be set somewhere between what the product costs to make and sell and its value to the customer. If price exceeds the perceived value of the product to potential purchasers, it has no market. If the price is below what the product costs to produce, the business cannot survive for very long. Where a price should be set between cost and customer value is a strategic decision.

In many financial transactions, it is customary to quote prices in other ways. The most obvious example is in pricing a loan, when the cost will be expressed as the percentage rate of interest. The total amount of interest payable depends upon credit risk, the loan amount and the period of the loan. Other examples can be found in pricing financial derivatives and other financial assets. For instance the price of inflation-linked government securities in several countries is quoted as the actual price divided by a factor representing inflation since the security was issued.

Price sometimes refers to the quantity of payment *requested* by a seller of goods or services, rather than the eventual payment amount. This requested amount is often called the asking price or selling price, while the actual payment may be called the transaction price or traded price. Likewise, the bid price or buying price is the quantity of payment *offered* by a buyer of goods or services, although this meaning is more common in asset or financial markets than in consumer markets.

Economists sometimes define price more generally as the ratio of the quantities of goods that are exchanged for each other.

**The Concept of Price and Value**

The paradox of value was observed and debated by classical economists. Adam Smith described what is now called the *diamond – water paradox*: diamonds command a higher price than water, yet water is essential for life and diamonds are merely ornamentation. Use value was supposed to give some measure of usefulness, later refined as marginal benefit while exchange value was the measure of how much one good was in terms of another, namely what is now called relative price.

**Now let's discuss about the Cost**

Costs are the monetary value of expenditures for supplies, services, labor, products, equipment and other items purchased for use by a business or other business entity. It is the amount denoted on invoices as the price and recorded in bookkeeping records as an expense or asset cost basis.

Costs are often further described based on their timing or their applicability. In production, a cost is the value of money that has been used up to produce something, and hence is not available for use anymore. In business, the cost may be one of acquisition, in which case the amount of money spent to acquire it is counted as cost. In this case, money is the input that is gone in order to acquire the thing.

Product costs may be classified as variable, fixed and semi-fixed. Take the case of an airline. It may consider the annual depreciation on an aircraft as a fixed cost. Taking the plane off the ground to fly from one city to another incurs certain semi-fixed costs like the fuel, the compensation of flight personnel, the airport fees and so on. These costs are approximately the same for any given flight whether the plane is empty, half-loaded or completely full of passengers. The variable costs of the flight would include primarily the costs of food and beverage. They vary directly with the number of passengers.

If fixed and semi-fixed costs make up a larger portion of total costs, as in the airline example, pricing to get maximum capacity utilization is crucial. Until the seller covers fixed costs, money is lost. After fixed costs are covered, each incremental sale contributes proportionally large amounts to profits. If variable costs are a relatively high percentage of total costs (which is quite likely in many manufacturing firms), pricing to maximize unit contribution (i.e. the difference between the unit variable cost and price) will be critical to profitability. Under these cost conditions, the manufacturer would naturally work to maximize unit prices and to reduce variable costs. Above are two examples. In the first one, the objective of the airline's pricing strategy will be to generate enough total revenue to cover its fixed costs and above that to get maximum capacity utilization to make profits. In the second one, a manufacturer will price to cover its high variable costs per unit and get enough contribution to amortize fixed costs and make a profit.

How cost is calculated for pricing purposes is a matter of managerial judgment. It may be construed as full cost or as variable cost. It may be the cost levels being experienced or experience curve estimates of future costs. The interpretation of cost factors for pricing will depend greatly on product/ market objectives.

Some business managers set prices simply by adding a percentage over costs to provide an acceptable profit. That approach has two advantages. Price is simple to calculate and if a firm is a low-cost producer, relative to competitors, so-called 'cost-plus' pricing may seem to provide some protection from competitive attack. The trade-off for simplicity and security may be lost profits.

In theory, the amount of profit that is sacrificed is the difference between what customers actually paid and what they would have been willing to pay. Compared with cost-plus pricing, pricing according to the value of the product to the customer is more difficult and speculative. The challenge is to determine what the value of the product is in the customer's mind. First, it is useful to distinguish between perceived value and potential value. Perceived value is what the buyer now recognizes. Potential value is what the buyer can be educated to see in the product. That is the task of marketing. It may be accomplished through advertising, personal selling and getting the buyer to try the product. Second, product value may be perceived differently by different customer groups or market segments. Different segments may place different values on the several elements that make up the set of product (which in the broadest sense, includes the product or service itself, its brand image, its availability, and the service that the seller provides) attributes. For example, a large firm may place little value on the technical service a supplier offers it (the large firm) has comparable or superior technical resources of its own. But a small company may be highly dependent on the supplier's technical services and place high value on them in making purchasing decisions.

A third factor to consider in establishing customer value is the options that a potential buyer may have. Clearly, if the buyer can purchase a product at a lower price from one source than another, the lower price sets the upper bound in the marketplace. But for the buyer to have such effective options, he/she must have knowledge of them. Another option the customer has may be not to buy the product at all but to make-do with what one has. Nevertheless, it is a real and important consideration. Finally, the price set by the seller is often taken by the potential customer as one measure of the value of the product.

The buyer may infer that value is, in fact, connoted by price and choose the higher-priced option. Value, then, for a given product tends to be a function of (1) the utility of its several attributes to the prospective buyer, (2) the options the buyer has and is aware of (i.e. the offerings of competing suppliers and the option of not buying at all), and (3) the extent to which the buyer perceives price itself as a measure of product value. If the seller truly value-prices, then different prices would be charged for the product to different customer groups. It is referred as price discrimination.

A relevant consideration in thinking about price as an expression of product value is how sensitive is the buyer to price. Price sensitivity will vary considerably among purchasers and, for the same purchaser, it will vary from one time and one set of circumstances to another. Buyers who can pass on the cost of the purchase are less sensitive to price than those who cannot. Price sensitivity also relates to the performance standards by which the purchaser measures. Viewed differently, performance measures effectively establish the relative worth of different product attributes for the manager who has to make the decision and be judged for it. Another factor in price sensitivity is the uncertainty that attends switching from one supplier to a lower-priced source. Modest price differences are often insufficient to overcome the purchaser's uncertainties about an untried supplier's product quality, reliability and service.

**Let's see the Types of Costs:** The various cost may be classified as

1. Variable Cost
2. Fixed Cost
3. Opportunity Cost
4. Operating Cost
5. Direct Cost
6. Indirect Cost

**Variable Cost**: A variable cost is a corporate expense that varies with production output. Variable costs are those costs that vary depending on a company's production volume; they rise as production increases and fall as production decreases. A fixed cost is a cost that does not change with an increase or decrease in the amount of goods or services produced or sold. Fixed costs are expenses that have to be paid by a company, independent of any business activity.

Variable costs differ from fixed costs such as rent, advertising, insurance and office supplies, which tend to remain the same regardless of production output. Fixed costs and variable costs comprise total cost.

Variable costs can include direct material costs or direct labor costs necessary to complete a certain project. For example, a company may have variable costs associated with the packaging of one of its products. As the company moves more of this product, the costs for packaging will increase. Conversely, when fewer of these products are sold the costs for packaging will consequently decrease.

**Fixed Cost**: A fixed cost is an operating expense of a business that cannot be avoided regardless of the level of production. Fixed costs are usually used in breakeven analysis to determine pricing and the level of production and sales under which a company generates neither profit nor loss. Fixed costs and variable costs form the total cost structure of a company, which plays a crucial role in ensuring its profitability.

A business must incur variable and fixed costs to produce a given amount of goods. Variable costs per item stay relatively flat, and the total variable costs change proportionately to the number of product items produced. Fixed costs per item decrease with increases in production. Thus, a company can achieve economies of scale when it produces enough goods to spread the same amount of fixed costs over a larger number of units produced and sold. For example, a $100,000 lease spread out over 100,000 widgets means that each widget carries with it $1 in fixed costs. If the company produces 200,000 widgets, the fixed cost per unit drops to 50 cents.

Companies with large fixed costs and unchanged variable costs in their production process tend to have the greatest amount of operating leverage. This means that after a company achieves the breakeven point, all else equal any further increases in sale will produce higher profits in proportion to sales increase for a company up to a point where fixed costs per unit sold become negligible. Conversely, decreases in sales volume can produce disproportionately higher declines in profits. An example of companies with high fixed cost component are utility companies, which have to make large investments in infrastructure and have subsequently large depreciation expenses with relatively stable variable costs per unit of electricity produced.

**Opportunity Cost:** Opportunity cost refers to a benefit that a person could have received, but gave up, to take another course of action. Stated differently, an opportunity cost represents an alternative given up when a decision is made. This cost is, therefore, most relevant for two mutually exclusive events. In investing, it is the difference in return between a chosen investment and one that is necessarily passed up.

When assessing the potential profitability of various investments, businesses look for the option that is likely to yield the greatest return. Often, this can be determined by looking at the expected rate of return for a given investment vehicle. However, businesses must also consider the opportunity cost of each option. Assume that, given a set amount of money for investment, a business must choose between investing funds in securities or using it to purchase new equipment. No matter which option is chosen, the potential profit that is forfeited by not investing in the other option is called the opportunity cost.

**Operating Cost**: An operating cost is an expense associated with day-to-day business activities and may be variable or fixed. An example of an operating cost is a company's inventory. Suppose a company produces and sells microchips. The microchips must be stored and maintained, which is an operational cost to the company. Operating costs can also be used to calculate a company's operating expense ratio, which shows how efficient a company is in generating sales.

**Direct Cost:** A direct cost is related to producing a good or service. A direct cost is the material, labor, expense, or distribution cost associated with producing a product. It can be accurately and easily traced to a product, department or project. For example, suppose a worker spends eight hours building a car for a car manufacturing company. The direct costs associated with the car are the wages paid to the worker and the parts used to build the car.

**Indirect Cost:** On the other hand, an indirect cost is an expense unrelated to producing a good or service. An indirect cost cannot be easily traced to a product, department, activity or project. For example, a semiconductor company rents office space in a building and produces microchips. The wages paid to the workers and the material used to produce the microchips - are direct costs. However, the electricity used to power the entire building is considered an indirect cost because it appears on one bill and is difficult to trace back to the semiconductor company.

***There is some more classification of cost on the basis of relevance in Decision Making they are;***

1. Opportunity Cost: As mentioned earlier, it refers to the cost of the next best alternative action that is sacrificed in order to pursue the chosen action.
2. Sunk Cost: It is a cost which is not altered by a change in current business activity. It can be understood as an irrevocable cost of the past business activity which has to be incurred now and is irrelevant to the current business scenario.
3. Replacement Cost: It is the cost of replacing an asset, plant machinery, equipment etc.
4. Imputed Cost: These are hypothetical costs which are considered just for the purpose of decision making and do not involve any actual cash outflow.
5. Real Cost: It refers to the cost of all efforts and sacrifices made by the owners of factors of production in production of a commodity.
6. Social Cost: It refers to the cost involved in transforming raw materials into finished products. These types of cost of direct and indirect labour, overheads and expenses.
7. Historical Cost: It refers to the actual cost of acquiring an asset or producing a product or service.
8. Normal Cost: It is a cost which is normally incurred in achieving a certain level of output under certain conditions.
9. Abnormal Cost: It is the cost which is not normally incurred at a given level of output under normal conditions. It is an irregular cost which would not exist in ideal conditions.
10. Differential Cost: It is the change in cost due to change in level of production
11. Incremental Cost: It is an additional cost in relation to a change in the level or nature of business activity

***Let's see the Key Difference between Price and Cost***

The difference between the two is that, the term 'price' is defined as the amount that the customers pay for a product, whereas the term 'cost' is defined as the amount spent by a business in making a product. Often, the terms 'price' and 'cost', in general, are used interchangeably. However, both the terms have different meaning, but are inter-related.

The term 'price' is defined as the actual amount of money that a client or a consumer has to waive in order to acquire a certain product or service. It is expressed in units, usually in the form of currency. On the other hand, the term 'cost' is defined as the amount being paid to produce a product or a service before it is marketed or sold to the intended consumers. It is simply the amount of money involved in production, marketing and distribution.

Although, both price and cost involve the exchange of money, they are not synonyms. In terms of business, cost comes before price. As, 'cost' refers to the seller's money involved to produce a good, 'price' refers to the money given to the seller for the product. The term, cost, here includes the capital, materials, bills, salaries and wages of workers, also the cost of putting up a product, which is why, everything is included when deciding the 'cost' of the product.

Price, on the other hand, is the point where supply and meets demand. It represents the value of the product itself. Also, the 'price' of a product is the combination of production costs and added profits for the seller. For the seller, the price is a future income, whereas the cost represents past expenses.

In terms of value, the value of 'costs' are lower as compared to the value of 'price'. Here, the values of the profit are added to increase the value of the 'price'. As, from a sellers point of view, cost is already the money spent, at the same time the price is an anticipated income as a method to regain back the costs made in production. Additionally, both, cost and price, are classified further such as the selling price, transaction price, bid price, or buying price, and fixed cost, variable cost, etc, respectively. Any other differences between the two terms can be read below.

***Let's further elaborate the difference between Price and Cost on the basis of some parameters as given below;***

| | **Price** | **Cost** |
|---|---|---|
| **Definition** | The term 'price' is defined as the amount that the customers pay for a product. | The term 'cost' is defined as the amount spent by a business in making a product. |
| **Product** | It is amount of money given to buy a product. | It is the amount of money used to produce a product. |
| **Implication** | It implies the future acquisitions of the buyers. | It is the money spent in mainting the product. |
| **Money used** | Here, the money is used to gain something. | Here, the money is used in the production process of labor, capital, materials, wages, bills, and other transaction costs. |
| **Value determined by** | The 'price' is determined by adding the production costs and seller's profit. | It is said to be a component of the price. |
| **Value** | The value is higher as compared to cost. | The value is lower as compared to price. |
| **Demand** | It is demanded from consumers. | It is demanded from sellers. |

*I hope you are now able to understand the concept of Price & Cost and the difference between these two very critical issues and its significance for an entrepreneur*

*In the next program we will discuss about the various Pricing policies and strategies*

*Thanks for your kind attention!*

## E-Content

## 8 (a): Difference between Price and Cost

**SUMMARY**

The term Price & Cost are often used interchangeably by people when they want to mean the amount of money required to buy something. The two terms are somewhat related, but are quite different in practical application. The price is the amount that customers pay for a product or a service. When a customer pays a price for something, the price represents the value of what he/she has to give up in acquiring a product or service. The cost is the amount spent by a firm in making/ providing the product/ service. The cost can be classified into various categories depending upon its nature. Cost is often split into two elements: the variable cost, that vary in proportion to the quantity being made; and fixed costs, that are required for production to take place but which remain same and do not vary as output varies.

The term 'price' is defined as the actual amount of money that a client or a consumer has to waive in order to acquire a certain product or service. It is expressed in units, usually in the form of currency. On the other hand, the term 'cost' is defined as the amount being paid to produce a product or a service before it is marketed or sold to the intended consumers. It is simply the amount of money involved in production, marketing and distribution.

In terms of business, cost comes before price. As, cost refers to the seller's money involved to produce a good, price refers to the money given to the seller for the product. The term, cost, here includes the capital, materials, bills, salaries and wages of workers, also the cost of putting up a product, which is why, everything is included when deciding the 'cost' of the product. Price, on the other hand, is the point where supply and meets demand. It represents the value of the product itself. Also, the 'price' of a product is the combination of production costs and added profits for the seller. For the seller, the price is a future income, whereas the cost represents past expenses.

**OBJECTIVES**

Upon successful completion of this lecture, students will be able to:

- Define and understand the concepts of Price and Cost.
- Explain different types of Cost.
- Classify the cost on the basis of relevance in Decision Making.
- Understand the concept of Price and value.
- Differentiate Price from Cost

## Frequently Asked Questions

1. **What is Price?**

A price is an expression of value and it is the seller's estimate of what all of this is worth to potential buyers. To the extent that the product or service finds markets and is profitable at given price levels, it provides a viable economic base for building and maintaining a business.

2. **What is Cost?**

Cost is the amount incurred on the inputs like land, labour, capital, enterprise, etc. for producing any product. It is the amount of money spent by the company in the manufacturing of a product.Costs are often further described based on their timing or their applicability. In production, a cost is the value of money that has been used up to produce something, and hence is not available for use anymore.

3. **What are the various types of Cost?**

The various Costs may be classified as

**Variable Cost**: A variable cost is an expense that varies with production output. Variable costs are those costs that vary depending on a company's production volume; they rise as production increases and fall as production decreases.

**Fixed Cost**: A fixed cost is a cost that does not change with an increase or decrease in the amount of goods or services produced or sold. Fixed costs are expenses that have to be paid by a company, independent of any business activity. A fixed cost is an operating expense of a business that cannot be avoided regardless of the level of production.

**Operating Cost**: It is an expense associated with day-to-day business activities and may be variable or fixed. An example of an operating cost is a company's inventory.

**Direct Cost:** Direct Cost is related to producing a good or service. A direct cost is the material, labor, expense, or distribution cost associated with producing a product. It can be accurately and easily traced to a product, department or project..

**Indirect Cost:** On the other hand, an indirect cost is an expense unrelated to producing a good or service. An indirect cost cannot be easily traced to a product, department, activity or project.

4. **Discuss various types of cost on the basis of relevance in Decision Making**

12. Opportunity Cost: As mentioned earlier, it refers to the cost of the next best alternative action that is sacrificed in order to pursue the chosen action.
13. Sunk Cost: It is a cost which is not altered by a change in current business activity. It can be understood as an irrevocable cost of the past business activity which has to be incurred now and is irrelevant to the current business scenario.
14. Replacement Cost: It is the cost of replacing an asset, plant machinery, equipment etc.

15. Imputed Cost: These are hypothetical costs which are considered just for the purpose of decision making and do not involve any actual cash outflow.
16. Real Cost: It refers to the cost of all efforts and sacrifices made by the owners of factors of production in production of a commodity.
17. Social Cost: It refers to the cost involved in transforming raw materials into finished products. These types of cost of direct and indirect labour, overheads and expenses.
18. Historical Cost: It refers to the actual cost of acquiring an asset or producing a product or service.
19. Normal Cost: It is a cost which is normally incurred in achieving a certain level of output under certain conditions.
20. Abnormal Cost: It is the cost which is not normally incurred at a given level of output under normal conditions. It is an irregular cost which would not exist in ideal conditions.
21. Differential Cost: It is the change in cost due to change in level of production
22. Incremental Cost: It is an additional cost in relation to a change in the level or nature of business activity

**5. What is the concept of Price and Value?**

The paradox of value was observed and debated by classical economists. Adam Smith described what is now called the *diamond – water paradox*: diamonds command a higher price than water, yet water is essential for life and diamonds are merely ornamentation. Use value was supposed to give some measure of usefulness, later refined as marginal benefit while exchange value was the measure of how much one good was in terms of another, namely what is now called relative price.

**6. How is Price different from Cost?**

The difference between the two is that, the term 'price' is defined as the amount that the customers pay for a product, whereas the term 'cost' is defined as the amount spent by a business in making a product. Often, the terms 'price' and 'cost', in general, are used interchangeably.

In terms of business, cost comes before price. As, 'cost' refers to the seller's money involved to produce a good, 'price' refers to the money given to the seller for the product. Price, on the other hand, is the point where supply and meets demand.

**7. What is the difference between Fixed Cost and variable cost**

Fixed costs and variable costs form the total cost structure of a company, which plays a crucial role in ensuring its profitability. A fixed cost is an operating expense of a business that cannot be avoided regardless of the level of production whereas the variable cost is an expense that varies with production output. Variable costs are those costs that vary depending on production volume; they rise as production increases and fall as production decreases.

8. **What do you understand by Opportunity cost**

   Opportunity cost refers to a benefit that a person could have received, but gave up, to take another course of action. In other words, an opportunity cost represents an alternative given up when a decision is made. This cost is, therefore, most relevant for two mutually exclusive events. In investing, it is the difference in return between a chosen investment and one that is necessarily passed up.

**QUIZ:**

1. Variable Costs remain constant in the short run and only change in the long run.

   (a) True

   **(b) False**

2. In theory, fixed cost remains constant irrespective of changes in output.

   **(a) True**

   (b) False

3. Variable cost per unit is fixed

   **(a) True**

   (b) False

4. Fixed cost changes with change in output

   (a) True

   **(b) False**

5. Opportunity Cost is the cost of the next best alternative action that is sacrificed in order to pursue the chosen action.

   **(a) True**

   (b) False

6. **Historical Cost** refers to the actual cost of acquiring an asset

   **(a) True**

   (b) False

7. Which of the following cost is also known as overhead cost or on cost:
   (a) Cost of direct labour
   (b) Cost of indirect labour
   (c) Direct expenses
   **(d) Indirect expenses**

8. Which of the following calculate the actual cost of product:
   (a) Cost estimation
   (b) Costing
   (c) Both a and b
   **(d) None of these**

9. Price is the only element in the marketing mix that produces:
(a) Fixed cost
(b) Expense
(c) Variable cost
**(d) Revenue**

**GLOSSARY:**

**Abnormal Cost**: It is the cost which is not normally incurred at a given level of output under normal conditions. It is an irregular cost which would not exist in ideal conditions.

**Cost:** Cost is the amount incurred on the inputs like land, labour, capital, enterprise, etc. for producing any product

**Differential Cost**: It is the change in cost due to change in level of production

**Direct Cost:** Direct Cost is related to producing a good or service. A direct cost is the material, labor, expense, or distribution cost associated with producing a product. It can be accurately and easily traced to a product, department or project..

**Fixed Cost:** A fixed cost is an operating expense of a business that cannot be avoided regardless of the level of production.

**Historical Cost**: It refers to the actual cost of acquiring an asset or producing a product or service.

**Imputed Cost**: These are hypothetical costs which are considered just for the purpose of decision making and do not involve any actual cash outflow.

**Incremental Cost**: It is an additional cost in relation to a change in the level or nature of business activity

**Indirect Cost:** On the other hand, an indirect cost is an expense unrelated to producing a good or service. An indirect cost cannot be easily traced to a product, department, activity or project.

**Normal Cost**: It is a cost which is normally incurred in achieving a certain level of output under certain conditions.

**Operating Cost**: It is an expense associated with day-to-day business activities and may be variable or fixed. An example of an operating cost is a company's inventory.

**Opportunity Cost**: It refers to the cost of the next best alternative action that is sacrificed in order to pursue the chosen action.

**Price**: Price' is defined as the amount that the customers pay for a product / the amount of money expected, required, or given in payment for something.

**Real Cost**: It refers to the cost of all efforts and sacrifices made by the owners of factors of production in production of a commodity.

**Replacement Cost**: It is the cost of replacing an asset, plant machinery, equipment etc.

**Revenue:** In accounting, revenue is the income that a business has from its normal business activities, usually from the sale of goods and services to customers. Revenue is also referred to as sales or turnover.

**Social Cost**: It refers to the cost involved in transforming raw materials into finished products. These types of cost of direct and indirect labour, overheads and expenses.

**Sunk Cost**: It is a cost which is not altered by a change in current business activity. It can be understood as an irrevocable cost of the past business activity which has to be incurred now and is irrelevant to the current business scenario.

**Value:** the regard that something is held to deserve; the importance, worth, or usefulness of something.

**Variable Cos**t: Variable costs are those costs that vary depending on a company's production volume; they rise as production increases and fall as production decreases.

**ASSIGNMENT**

1) Explain the concept of Price and Cost
2) What are the different types of cost?
3) Explain the concept of Price and Value?
4) Differentiate between fixed cost and variable Cost.

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## SCRIPT – 8 (b) : Pricing Policies

***Hello friends!***

*In this program we are going to discuss about the various pricing policies where a firm can earn maximum profit and have a large market share.*

Every business can have ranges of pricing policies/ strategies while selling a range of products which suits best for them. The pricing policies will depend on the maximised profitability for each unit of product sold and it will help to generate maximum revenue to the business. The maximised profitability for a business will provide a shield from the uneven shocks and to avert the competition created by the new entrants in the market.

The subject matter expert of this programme is Dr Naseeb Ahmad.

*The subject expert of this program is* ***Dr. Naseeb Ahmad****, Honorary Deputy Director, Centre for Innovation & Entrepreneurship & Associate Professor, Department of Commerce and Business Studies, Jamia Millia Islamia (Central University), New Delhi. He is having experience of about 17 years as a teacher and researcher in the area of Entrepreneurship & Finance. He has organised more than 70 Entrepreneurship Development Programs, workshops, seminars, events in the area of Innovation & Entrepreneurship and have authored many research papers in the area of Entrepreneurship & Finance, published in National & International Journals*

The pricing is the process of determining the price of a commodity or a product/ service which must be inclusive of the cost of production plus the incentives, also termed as the profit. A business always has the motive of maximising its profits and increases its market share, but it will depend on the various factors such as the condition of the market based on the number of sellers and buyers. Here, in this topic, we shall discuss those factors in detail which are involved in determining the price of a product.

Here are the some of the standard definitions of Price which will enhance the understanding of the price mechanism of a particular product.

According to Prof. William J. Stanton, "Price is the amount of money and/or other items with utility needed to acquire a product."

According to Prof. Philip Kotler, "Price is the only element in the marketing mix that produces revenue, the other elements produce cost."

According to David J. Schwartz, "Price is the exchanged value of the product or service expressed in terms of money."

From the above definitions we can understand that the 'Price' of a product is:

1. The amount of money
2. The only element in the market that produces revenue
3. The exchange value of a product or a service in terms of money

**Now, let us discuss the various considerations involved while determining/formulating the Pricing strategy.**

The pricing decision is subject to the influence of many economic and non-economic variables. The identification of such variables is a difficult process which needs a serious attention of the entrepreneur/ marketer. Marketers have substantial control over such factors which operate inside the organization commonly known as internal factors. However, management can exercise little control over external factors which are outcome of the external forces that operate outside the organization. A brief discussion of such factors follows:

**Objectives:** Pricing objectives largely influence the pricing decisions. Each objective must be explained clearly so that marketing manager may not feel any difficulty while achieving the same with the instrument of price. A firm should have specific pricing objective for its each product offer.
**Costs:** Generally costs form basis for pricing decisions, therefore, a proper study of both fixed and variable cost is essential for accurate pricing decision. Further, management should pay a due attention to other types of costs like incremental costs, replacement costs, controllable, costs, out-of-pocket costs and opportunity costs.
**Demand:** Pricing is directly influenced by the demand of product or service. In turn demand is influenced by the following factors:

- Number and size of competitors
- Nature and economic capacity of customers
- Price of the competitor's product
- Consumer preferences

The proper investigation of above listed factors is essential in pricing decision.
**Competition:** Competition is the major force in a competitive market that affects pricing decisions of a firm. Therefore, a marketer should not only study the competitors' current pricing strategies but must analyze them to work out their future pattern and should accordingly frame the pricing policies.
**Product Differentiation:** A differentiated product provides a firm an opportunity to set price for it. If the product forms identical features with its other substitutes, it is impossible for any firm to deviate sharply from the common price levels.
**Suppliers and Buyers:** Pricing decisions are directly affected by the approach of suppliers and buyers. For example if the prices of raw materials increase, the suppliers will shift the incidence of prices rise to producers who, in turn pass it on to the customers. This is a serious situation which needs a detailed analysis by the marketers. Buyers also have a significant influence in the pricing decisions particularly under a market situation where the number of buyers is less but their share in a firm's sales is maximum. At the same, scarcity and value of the raw material used also calls for proper attention from the management in pricing decisions.
**Government Control:** In many countries prices of private firms are largely controlled by various Government legislations and acts to control markets. The impact of Government on pricing decisions is more pronounce in such industries where Government is the largest buyers of the production.
**Flexibility:** The firm should adopt such flexible pricing policy which can provide them with a scope of price discretion, to meet the changes in an economic situation if any. If a firm is selling its product in a highly competitive market, it will have little scope for

pricing discretion. Prices should also be flexible to take care of cyclical variations in the future.

*Now, let's discuss the objectives of the Pricing Policy*

**Objectives of Pricing Policy**

- Objectives of the pricing policy will depend upon the objectives set by a firm in order to get maximum profit by selling a product or a service. It may vary firm to firm, as we can easily find the varying prices of the same product or service such as wholesale price, retail price, published price, quoted price, actual price and so on.
- Special discounts, special offers, methods of payment, amounts bought and transportation charges, trade-in values, etc., are some sources of variations in the price of the product.
- For pricing decision, one has to define the price of the product very carefully. The pricing decision of a firm, in general, will have considerable repercussions on its marketing strategies. This implies that when the firm makes a decision about the price, it has to consider its entire marketing efforts.
- Pricing decisions are usually considered a part of the general strategy for achieving a broadly defined goal.

While setting the price, the firm may aim at the following objectives:

1. Profit oriented objective
2. Sales oriented objective
3. Status-quo oriented objective

**1. Profit oriented objective:** All the business organisations or companies are conducted with the main objective of earning a profit. Their profit making objective may be for a long term or short term. Under such task companies or organisations form two types of objectives as follows:

(i) To achieve a target result: In this method, a business organisation sets short term target for a particular period of time. The firm emphasises more on to achieve the target result during the set period and accordingly, they fix the prices of their products. For instance, business or a firm has decided to earn 6% of the profit from sales and 4% from investment for a particular period of time then their focus will be more on sales and investments. Such method of earning a profit by fixing the price is beneficial for those firms who do not want to face the heat of strangling competition in the market.

(ii) To maximise profit: For the firms, there are a number of objectives for making a profit. The objective of profit maximisation is the second important objective, but the objective has an adverse effect on the customers. Usually, the firm in order to earn maximum profit in the short term fixes maximum price of a product which leaves a bad impression on the customers. So, a firm should adopt pricing strategies which involve maximum profit in the long run rather than for a shorter period of time.

2. **Sales oriented objective:** A firm may adopt a lower price policy to increase its sales volume rather charging a higher price for that product to get maximum profit. In fact, sales oriented objectives are the best way to capture the market by increasing sales quantity and hence increase the market share. This objective can further be studied by dividing into two classes as follows:

(i) **To increase sales volume:** A firm may have the policy of increasing sales by lowering the price of a product. This emphasises to increase the certain percent of sales quantity can be increased getting permission from sales department or adopting other pricing strategies. Such strategy discourages possible competitions. Besides this, profit can increase in the long run due to minimum production cost.

(ii) **To increase market share:** Every company or firm wishes to promote the sale of its products. The objective of pricing may be to increase sales quantity. This also increases market share. In this age of the competitive environment of the market, it is also necessary to increase market share. Some companies adopt a policy to expand market share gradually; some others adopt the policy to expand market share immediately and control it. In order to expand market share, the price of products or services should be low in comparison to competitors.

3. **Status-quo oriented objective:** The objective of status-quo is to be formulated to maintain the present situation for a long time, which means the price of a product, will remain same for a long time. The firm or company will not take any decision regarding changes in the price of that product. This status-quo includes the objectives like a continuation of the same price, facing competition and continuation of existence. The status-quo objective can also be studied in three classes as follows:

(i) **Stability in price:** Price stability is one of the important objectives. This remains effortful to maintain prices at the same rate for a time. Price leadership companies, frequent demand changing companies and the companies wishing to maintain reputation, try not to let price fluctuate. Such organisations or companies also wish to maintain revenues, the price of their products, profits etc. at the same level. They try to maintain the same price by increasing production and supply in prosperity period and decreasing production and supply in depression period.

(ii) **To meet the competition:** This is the age of market competition. Every business company needs to face competition for survival/existence. Companies/firms have to fix the price of their products or services as fixed in the markets. So, the price is fixed with a view to facing/meeting competition in the market. The price leadership companies should fix/determine the price of their products by studying and considering market prices.

(iii) **Survival:** It becomes very difficult to save the company/firm from high competition in the market. In such situation, the firm should fix the prices of their products in a way that only production cost can be recovered. In such situation, production cost may be equal to the revenue. (Production cost = Revenue). This situation is called breakeven point. In this situation, there is neither profit nor loss. In this way, company's existence is saved and it expects improvement in future. Business companies make such objectives waiting for a bright future.

**Now let's discuss another aspect in pricing i.e. Pricing Process**

So far you have seen that pricing is one of the most difficult marketing decision areas because of numerous variables involved. The larger the organization the more variables internal and external forces, it has to analyze. To reduce the problems of pricing decisions, marketing experts have succeeded in developing a process that is helpful to management to formulate a sound pricing policy. The process commonly known as strategic pricing process consists of five steps as mentioned below:

1. ***Study of Target Market:*** The most challenging task an entrepreneur faces in a pricing decision is to study the nature of target market. A pricing decision is highly sensitive to demographic and psychological dimensions of the target. Therefore, an entrepreneur is usually unable to decide about the price without knowledge of such dimensions of the market.

2. ***Study of Existing Competition:*** The level of competition plays a deciding role in the pricing decisions. Consequently, a firm should conduct an extensive investigation into the existing as well as the future competitive structure of the industry. In this direction the study of pricing, promotional, distribution and other marketing policies adopted by the competitive firms will be of great use to the market manager.

3. ***Assigning Price a Role in the Marketing Mix:*** As we know, pricing is one of the components of the market mix, therefore, its decision is lightly influenced by the interaction of other components of the mix—product, and promotion. Consequently, a market manager has to decide about price in relation to other elements of marketing mix. Thus, in this stage of pricing process, the role of pricing in marketing mix is examined and an attempt is made to maintain a balance among various inputs of the mix.

4. ***Examining Cost Structure and Demand:*** A marketer must analyze the relationship between demand, cost and profit in order to arrive at the final price. Such a study will provide him a framework for setting an accurate price. The relationship between demand, cost and profit has been discussed in detail at the later part of this chapter.

5. ***Determining Strategic Price:*** The previous four steps set the limits for the products price range. At this point, the marketers need to consider such overall objectives as satisfactory profits, market share, and higher volume before choosing a price that best coincides with their objectives and with the realities of the market. This price is often called a basic price or list price.

Accurate and completed information is prerequisite for the successful working of strategic pricing process. In the absence of such information, strategic pricing process may not be able to achieve its objectives.

**Let's see what are different Methods of pricing**

**There are various methods of pricing including the following;**

1. Cost Plus pricing.

2. Target pricing.

3. Going rate pricing.

4. Customary pricing.

5. Follow up pricing.

6. Differential pricing.

7. Marginal cost pricing.

8. Barometric pricing.

**1. Cost plus pricing:** This is the most common method used for the price. Under this method, the price is fixed to cover all costs and a predetermined percentage of profit.ie, the price is computed by adding a certain percentage to the cost of the product per unit. This method is also known as margin pricing or average cost pricing or full cost pricing or mark up prices. The business firm under oligopoly and monopolistic market are following this pricing policy.

**2. Target pricing:** This is an alternative to full cost pricing. Under this method, the cost is added to the predetermined target rate of return on capital invested. In this case, the company estimates future sales, future cost and calculates a targeted rate of return on capital invested. This is also called as the rate of return pricing.

**3. Marginal cost pricing:** Under the marginal cost pricing, the price is determined on the basis of marginal cost or variable cost. In this method, fixed costs are totally excluded.

**4. Differential pricing:** Under this method, the same product is sold at different prices to different customers, in different places, and at different periods. This method is called discriminatory pricing, or price discrimination. Examples, Cinema, theatre, telephone bills etc..

**5. Going rate pricing:** Under this method, prices are maintained at par with the average level of prices in the industry, i.e., under this method firm charges the prices according to what competitors are charging and the firms accepting the price prevailing in the industry in order to avoid a price war. This method is also called acceptance pricing or parity pricing.

**6. Customary pricing:** In the case of some commodities, the prices get fixed because they have prevailed over a long period of time e.g.the price of a cup of tea or coffee. In short, the prices are fixed by custom and the price will change only when the incurred cost changes significantly. It is also called conventional pricing.

**7. Follow up pricing:** This is the most popular price policy. Under this, a firm determines the price policy, according to the pricing policies of competitors in the industry. If the competitors reduce the price of the product, the firm also reduces the price of its product. If the competitors increase the price, the firm also follows the same.

**8. Barometric pricing:** This is the method of leadership pricing. In this type of price leadership, there is no leader firm. But one firm among the oligopolistic firms announces a price change first. This is followed by other firms in the industry. The barometric price leader need not be a dominant firm with the lowest cost or even the largest firm in the industry, but they respond to changes in business environments rapidly. On the basis of a formal or informal tacit agreement, the firms in the industry accept a firm as price leader who may act firstly upon the environment or market changes.

**Let's see the Pricing Strategies in Product Life Cycle Stages**

Entrepreneurs must adapt to the stages of the product life cycle to effectively sell and promote their products. Depending on the product life cycle stage, a firm will develop an appropriate pricing model which results in high profits. A new product goes through multiple stages during the course of its life cycle, including an introduction stage, growth stage, maturity stage and a decline stage. As a product ages, companies look exploring pricing changes.

1. **Pricing Strategies in Introduction Stage:** During the introduction stage, a company will invest time and money to publicize the name of its product and find a market for it. This is the product life cycle stage in which appropriate patents are filed and product branding begins. Some companies may initially price their new product cheaply (Penetrating Pricing) to develop a customer base. Other companies may initially price their products more expensively(Skimming) to make up for development expenses.

2. **Growth Stage:** During the growth stage, a company aims to develop brand recognition and increase their customer base. In this stage, new competitors also enter the market and more customers start using the product. Company face a pressure to lower the price below the introduction stage. Companies having unique product and minimal competition may use stable pricing strategy. Along this pricing strategies, the quality of their product is often improved based on early reviews, and technical support is usually enhanced. A larger distribution network is formed to keep up with the pace of demand.

3. **Maturity Stage Pricing Strategy:** Maturity stage can be defined as the period of zero growth rate. The concept of maturity period is useful to the extent it gives out signals for taking precaution with regard to pricing policy. This is the product life cycle stage in which the customer base is heavily fought over and price decreases most often occur. Additional features are added to distinguish a product from its competitors.

4. **Decline Stage Pricing Strategy:** In the decline stage, a company will make important decisions regarding the future of their product. They can choose to create the product with new features, or they can reduce the price and offer it at a discount. A company may choose to discontinue the product altogether, either disposing of their inventory or selling it to another company who is willing to manufacture and market it.

**Pricing a New Product**

Most companies do not consider pricing strategies in a major way, on a day-to-day basis. The marketing of a new product poses a problem because new products have no past information. Fixing the first price of the product is a major decision. The future of the company depends on the soundness of the initial pricing decision on the product. Of large multidivisional companies, top management needs to establish specific criteria for acceptance of new product ideas.

The price fixed for the new product must have completed the advanced research and development, satisfy public criteria such as consumer safety and earn good profits. In pricing a new product, below mentioned two types of pricing can be adopted:

(i) **Skimming Price:** Skimming price is known as a short period device for pricing. Here, companies tend to charge higher prices in initial stages. Initial high hopes to "Skim the Cream" of the market as the demand for new product is likely to be less price elastic in the early stages.

(ii) **Penetration Price:** Penetration price is also referred as stay out price policy since it prevents competition to a great extent. In penetration pricing, lowest price for the new product is charged. This helps in prompts sales and keeping the competitors away from the market. It is a long term pricing strategy and should be adopted with great caution.

**Multiple Products**

As the name indicates multiple products signifies the production of more than one product. The traditional theory of price determination assumes that a firm produces a single homogenous product. But firms in reality usually produce more than one product and then there exist interrelationships between those products.

Such products are joint products or multi–products. In joint products, the inputs are common in the production process and in multi-products the inputs are independent but have common overhead expenses. Following are the pricing methods followed –

**Full Cost Pricing Method**

Full cost plus pricing is a price-setting method under which you add together the direct material cost, direct labour cost, selling and administrative cost, and overhead costs for a product and add to it a markup percentage in order to derive the price of the product. The pricing formula is –

Pricing formula = Total production costs − Selling and administrative costs − Mark-up / Number of units expected to Sell

This method is most commonly used in situations where products and services are provided based on the specific requirements of the customer. Thus, there is reduced competitive pressure and no standardised product being provided. The method may also be used to set long-term prices that are sufficiently high to ensure a profit after all costs have been incurred.

**Marginal Cost Pricing Method**

The practice of setting the price of a product to equal the extra cost of producing an extra unit of output is called marginal pricing in economics. By this policy, a producer charges for each product unit sold, only the addition to total cost resulting from materials and direct labour. Businesses often set prices close to marginal cost during periods of poor sales.

**Dual Pricing**

In simple words, different prices offered for the same product in different markets is dual pricing. Different prices for the same product are basically known as dual pricing. The objective of dual pricing is to enter different markets or a new market with one product offering lower prices in the foreign country. There are industry specific laws or norms which are needed to be followed for dual pricing. Dual pricing strategy does not involve arbitrage. It is quite commonly followed in developing countries where local citizens are offered the same products at a lower price for which foreigners are paid more.

Airline Industry could be considered as a prime example of Dual Pricing. Companies offer lower prices if tickets are booked well in advance. The demand for this category of customers is elastic and varies inversely with price. As the time passes the flight fares start increasing to get high prices from the customers whose demands are inelastic. This is how companies charge a different fare for the same flight tickets. The differentiating factor here is the time of booking and not nationality.

***I hope you are now able to understand the various types of pricing policies and their relevance for an entrepreneur***

***Thanks for your kind attention!***

# E-Content - 8 (b): Pricing Policies


## SUMMARY

Pricing is the process of determining the price of a commodity or a product/ service inclusive of the cost of production plus profit. A business always has the motive of maximising its profits and increases its market share, but it will depend on the various factors such as the condition of the market based on the number of sellers and buyers.

A business firm can have a different pricing policies/ strategies while selling a range of products or service. The pricing policies will depend on the profitability of each unit of product/ service sold and it will help to generate maximum revenue to the business.

Price has a special role to play in developing countries where the marginal value of money is high than those of advanced nations. Price is the greatest and the strongest 'P' of the four 'Ps' of the mix. Marketing manager can regulate the product demand through this powerful instrument. Price increases or decreases the demand for the products.

Price is important to marketers because it represents marketers' assessment of the value customers see in the product or service and are willing to pay for a product or service. Price as a competitive weapon is of paramount importance. Any company whether it is selling high or medium or low priced merchandise will have to decide as to whether its prices will be above or equal to or below its competitors. Pricing is an important aspect of Marketing. So it needs to be done carefully. That is why organizations formulate pricing policies and strategies to fix the price of their products.

The pricing decision is subject to the influence of many economic and non-economic variables. The identification of such variables is a difficult process which needs a serious attention of the entrepreneur/ marketer. Marketers have substantial control over such factors which operate inside the organization commonly known as internal factors. However, management can exercise little control over external factors which are outcome of the external forces that operate outside the organization.


## OBJECTIVES

Upon successful completion of this lecture, students will be able to:

1. What is Pricing Policy
2. What are the different considerations involved while formulating pricing policies.
3. Explain Pricing Strategies in Product Life Cycle Stages.
4. Explain steps of pricing a new product.

# Frequently Asked Questions

## 1. What is Pricing policy?

The policy by which a company determines the wholesale and retail prices for its products or services is called ‘Pricing Policy’. It is of immense importance to set right price of the commodity in accordance with the pricing policy of the organization. Price is central to marketers because it represents marketers' assessment of the value customers see in the product or service and are willing to pay for a product or service.

## 2. What is the importance of Pricing policy?

Pricing Policy is the most important decision policy a business organization needs to make. Price is important to marketers because it represents marketers' assessment of the value customers see in the product or service and are willing to pay for a product or service. Price is the only element in the marketing mix that produces revenue; rest all incurs cost. It is important to formulate pricing policy as per the marketing objective of the business.

## 3. What are the objectives of Pricing policy?

Objectives of the pricing policy will depend upon the objectives set by a firm in order to get maximum profit by selling a product or a service. It may vary firm to firm, as we can easily find the varying prices of the same product or service such as wholesale price, retail price, published price, quoted price, actual price and so on.

Special discounts, special offers, methods of payment, amounts bought and transportation charges, trade-in values, etc., are some sources of variations in the price of the product. While setting the price, the firm may aim at the following objectives:

1. Profit oriented objective
2. Sales oriented objective
3. Status-quo oriented objective

## 4. What are different methods of Pricing policy?

There are various methods of pricing including the following;

a) Cost Plus pricing.
b) Target pricing.
c) Going rate pricing.
d) Customary pricing.
e) Follow up pricing.
f) Differential pricing.
g) Marginal cost pricing.
h) Barometric pricing.

5. **What is differential pricing?**
   Under this method, the same product is sold at different prices to different customers, in different places, and at different periods. This method is also called discriminatory pricing, or price discrimination. Examples, Cinema tickets, air tickets, etc.

6. **Explain Cost plus pricing method.**
   Cost plus pricing is the most common method used for the price. Under this method, the price is fixed to cover all costs and a predetermined percentage of profit.ie, the price is computed by adding a certain percentage to the cost of the product per unit.

7. **What are the steps in pricing Process?**

The pricing process consists of five steps as mentioned below:
(a) Study of Target Market
(b) Study of Existing Competition
(c) Assigning Price a Role in the Marketing Mix
(d) Examining Cost Structure and Demand
(e) Determining Strategic Price

**QUIZ:**

1. ________ pricing is the approach of setting a low initial price in order to attract a large number of buyers quickly and win a large market share.
(a) Market-skimming
(b) Value-based
**(c) Market-penetration**
(d) Leader

2. The skimming, penetration, bargaining and bundling are decided in the ______________ of the Marketing Mix strategy.
(a) **Price Decisions**
(b) Place Decisions
(c) Product Decisions
(d) Promotion Decisions

3. When Pepsi came out with Pepsi Blue and priced it at half price to attract buyers they were using, Pepsi was using ________.
(a) Market-skimming pricing
**(b) Market-penetration pricing**
(c) New-product pricing
(d) Discount pricing

4. A ..................... strategy will set an initially high price to „cream off" as much revenue as possible from the early purchasers.
**(a) skimming pricing**
(b) penetration pricing
(c) Differential pricing.
(d) Marginal cost pricing.

5. If a company believes that the company with the largest market share will enjoy the lowest costs and highest long-run profits, that company will probably choose which of the following pricing objectives as their primary course of action?
**(a) current profit maximization**
(b) product quality leadership
(c) market share leadership
(d) survival

6. A Health Food Store sells nutritional energy-producing foods. The price of the products sold varies according to individual customer accounts and situations. For example, long-time customers receive discounts. This strategy is an example of _____
(a) Cost-plus pricing
(b) Penetration pricing
(c) **Dynamic pricing**
(d) Everyday low pricing

7. Mr. A, marketer of XYZ Co. is selling his ice-cream in the market at Rs.20, 20% more than his competitors‟ price. Still his sales are increasing. Now his aim is to maintain same pricing. He enjoys which type of leadership?
(a) Promotion leadership
(b) **Price leadership**
(c) Cost leadership
(d) Product leadership

8. Customer cost will be considered as which of the following Ps of marketing mix?
(a) Product
(b) **Price**
(c) Place
(d) Promotion

**GLOSARRY**

**Barometric pricing:** This is the method of leadership pricing. In this type of price leadership, there is no leader firm. But one firm among the oligopolistic firms announces a price change first. This is followed by other firms in the industry.

**Cost plus pricing:** Under this method, the price is fixed to cover all costs and a predetermined percentage of profit.ie, the price is computed by adding a certain percentage to the cost of the product per unit.

**Cost:** Cost is the amount incurred on the inputs like land, labour, capital, enterprise, etc. for producing any product.

**Customary pricing:** In the case of some commodities, the prices get fixed because they have prevailed over a long period of time e.g. the price of a cup of tea or coffee. In short, the prices are fixed by custom and the price will change only when the incurred cost changes significantly. It is also called conventional pricing.

**Differential pricing:** Under this method, the same product is sold at different prices to different customers, in different places, and at different periods. This method is called discriminatory pricing, or price discrimination.

**Follow up pricing:** Under this method, a firm determines the price policy, according to the pricing policies of competitors in the industry. If the competitors reduce the price of the product, the firm also reduces the price of its product. If the competitors increase the price, the firm also follows the same.

**Going rate pricing:** Under this method, prices are maintained at par with the average level of prices in the industry, i.e., under this method firm charges the prices according to what competitors are charging and the firms accepting the price prevailing in the industry in order to avoid a price war.

**Marginal cost pricing:** Under the marginal cost pricing, the price is determined on the basis of marginal cost or variable cost. In this method, fixed costs are totally excluded.

**Penetration Price:** Penetration price is also referred as stay out price policy since it prevents competition to a great extent. In penetration pricing, lowest price for the new product is charged. This helps in prompts sales and keeping the competitors away from the market. It is a long term pricing strategy and should be adopted with great caution.

**Price Policy:** The policy by which a company determines the wholesale and retail prices for its products or services is called ‘Pricing Policy’.

**Price**: Price’ is defined as the amount that the customers pay for a product / the amount of money expected, required, or given in payment for something.

**Product Life Cycle Management:** Product life-cycle management (PLM) is the succession of strategies by business management as a product goes through its life-cycle.

**Revenue:** In accounting, revenue is the income that a business has from its normal business activities, usually from the sale of goods and services to customers. Revenue is also referred to as sales or turnover.

**Skimming Price:** Skimming price is known as a short period device for pricing. Here, companies tend to charge higher prices in initial stages. Initial high hopes to "Skim the Cream" of the market as the demand for new product is likely to be less price elastic in the early stages.

**Strategy:** a plan of action designed to achieve a long-term or overall aim.

**Target pricing:** Under this method, the cost is added to the predetermined target rate of return on capital invested. In this case, the company estimates future sales, future cost and calculates a targeted rate of return on capital invested. This is also called as the rate of return pricing.

## ASSIGNMENT

1. Discuss the various considerations involved while formulating the Pricing strategy.
2. What are the different Methods of pricing?
3. Explain Pricing Strategies in Product Life Cycle Stages.
4. Discuss the Pricing of a new product.
5. Discuss the steps involved in Pricing process.

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## Script – 8 (c): Standard and Marginal Costing

***Hello friends***

*In this program we are going to discuss about the Concept of standard costing and Marginal costing which is an important aspect to be considered by an entrepreneur in order to plan and control the various types of cost and for the optimum utilisation of resources*

From an Entrepreneur's point of view, "What a product should have costed" is more important than."What it did cost". Entrepreneurs are constantly comparing their product cost with "What it should have costed". Reasons for deviations need to be analyzed and remedial actions are taken.

"What a product should have costed" is a question of great concern to an entrepreneur for improvement of cost performance. A scientific answer to this problem, i.e., an answer based on reasons and consequences, is developed by use of standard costing and marginal costing which is the subject matter of this program

*The subject expert of this program is* ***Dr. Naseeb Ahmad****, Honorary Deputy Director, Centre for Innovation & Entrepreneurship & Associate Professor, Department of Commerce and Business Studies, Jamia Millia Islamia (Central University), New Delhi. He is having experience of about 17 years as a teacher and researcher in the area of Entrepreneurship & Finance. He has organised more than 70 Entrepreneurship Development Programs, workshops, seminars, events in the area of Innovation & Entrepreneurship and have authored many research papers in the area of Entrepreneurship & Finance, published in National & International Journals*

*First of all, let's talk about standard costing and briefly discuss different terms to be used in this lesson.*

**Standard**: "Standard is a desired attainable objective, a performance, a goal, a model".

**Standard Cost**: Standard cost is a predetermined estimate of cost to manufacture a single unit or a number of units during a future period.
The Chartered Institute of Management Accountants (CIMA), London, defines "Standard Cost" as, "a pre-determined cost which is calculated from management's standards of efficient operation and the relevant necessary expenditure. It may be used as a basis for price fixing and for cost control through variance analysis".

**Standard Costing**: According to the Chartered Institute of Management Accountants, London; Standard Costing is "the preparation and use of Standard Cost, their comparison with actual costs, and the analysis of variances to their causes and points of incidence".

The study of standard cost comprises of: a) Ascertainment and use of standard costs.

b) Comparison of actual costs with standard costs and measuring the variances.

c) Controlling costs by the variance analysis and d) Reporting to management for taking proper action to maximize the efficiency.

The various objectives of standard costing technique are:

1. To provide a formal basis for assessing performance and efficiency.
2. To control costs by establishing standards and analyzing of variances.
3. To enable the principle of 'management by exception' to be practiced at the operational level.
4. To assist in setting budgets
5. Assigning cost to materials, work-in-process and finished goods inventories.
6. Forms basis for establishing bids and contracts and for fixing selling prices.

To achieve the above objectives the following steps are adopted in standard costing:

- Determining the standard for direct material, direct labour and different overheads
- Ascertaining the actual cost of production
- Ascertaining the variances by comparing actual costs with standard costs
- Analyse the variances to know the reason for variances.
- Adopting corrective measures to control the variances in futures.

**Advantages of Standard Costing :** A good standard costing system results in the following advantages:

1. Use of standard costing leads to optimum utilization of men, material, and resource.
2. Budgets are compiled from standards.
3. Its use provides a yardstick for comparison of actual cost performance.
4. Areas of strengths and weakness are highlighted
5. It acts as a form of feed forward control that allows an organization to plan the manufacturing inputs required for different levels of output.
6. It operates via the management by exception principle where only those variances (i.e. Differences between actual and expected results) which are outside certain tolerance limits are investigated, thereby saving managerial time.
7. It motivates workers to strive for accomplishment of defined targets.
8. It is very useful to management in discharging functions, like planning, control, and decision-making and price fixation.
9. It creates an atmosphere of cost consciousness
10. Its introduction leads to simplification of procedures and standardization of products.

**However there are some disadvantages/ Limitations of Standard Costing such as**

1. A lot of input data is required which can be expensive
2. Unless standards are accurately set any performance evaluation will be meaningless.
3. Uncertainty in standard costing can be caused by inflation, technological change, economic and political factors, etc. Standards therefore need to be continually updated and revised.
4. The maintenance of the cost data base is expensive.
5. Setting of standards involves forecasting and subjective judgments with inherent possibilities of error and ambiguity.
6. Standard costing cannot be adopted in the firms which do not have uniform and standard production programme.
7. It is very difficult to predict controllable and uncontrollable variances.

***Now let's discuss the applications of Standard Costing as a Controlling Technique***

It is essential for management to have knowledge of costs so that decision can be effective. Management can control costs on information being provided to it. The technique of standard costing is used for building a proper budgeting and feedback system. The uses of standard costing to management are as follows.

1. ***Formulation of Price and Production Policies :*** Standard Costing acts as a valuable guide to management in the fixation of price and formulation production polices. It also assists management in the field of inventory pricing, product, product pricing profit planning and also in reporting to top management.

2. ***Comparison and Analysis of Data: Standard*** Costing provides a stable basis for comparison of actual with standard costs. It brings out the impact of external factors and internal causes on the cost and performance of the concern. Thus, it helps to take remedial action.

3. ***Cost Consciousness: An*** atmosphere of cost consciousness is created among the staff. Standard costing also provides incentive to workers for efficient performance.

***4. Better Capacity to Anticipate: An*** effective budget can be formulated for the future by laving price knowledge of the deviations of actual costs from standard costs. Data are available at an early stage and the capacity to anticipate about changing conditions is developed.

5. ***Better Economy, Efficiency and Productivity: Men***, machines and materials are more effectively utilized and thus benefits of economies can be reaped in business together with increased productivity.

6. ***Delegation of Authority and Responsibility: The*** net profit is analyzed and responsibility can be placed on the person in charge for any variations from the standards. It discloses adverse variations and particular cost centre can be held accountable. Thus, delegation of authority can be made by management to control the affairs in different departments.

7. ***Management by 'Exception':*** The principle of "management by exception' can be applied in the business. This helps the management in concentrating its attention on cases which are off standard, i.e., below or above the standard set. A pattern is provided for the elimination of undesirable factors causing damage to the business.

**Setting the Standard :**While setting standard cost for operations, process or products, the entrepreneurs should take into consideration the following :

1. Establish Standard Committee comprising Purchase Manager, Personnel Manager, and Production Manager. The Cost Accountant coordinates the functions.
2. Study the existing costing system, cost records and forms in use.
3. A technical survey of the existing methods of production should be undertaken.
4. Determine the type of standard to be used.
5. Fix standard for each element of cost.
6. Determine standard costs of each product.
7. Fix the responsibility for setting standards.
8. Account variances properly.
9. Ascertain the deviations by comparing the actual with standards.
10. Take necessary action to ensure that adverse variances are not repeated.

**Determination of Standard Costs :** The following preliminary steps are considered before setting standards:

(a) Establishment of cost centre (b) Classification and codification of accounts

(c) Types of standards and (d) Setting the standards.

*Let me explain these further*

***(a) Establishment of cost centre***. For fixing responsibility and defining the lines of authority, cost centre is necessary. "A cost centre is a location, person or item of equipment for which costs may be ascertained and used of the purpose of cost control". With the help of cost centre, the standards are prepared and the variances are analyzed.

***(b) Classification and codification of accounts***. Accounts are classified according to different items of expenses under suitable heading. Each heading may be given codes and symbols. Coding is useful for speedy collection and analysis.

***(c) Types of standards***. The different types of standards are given below:

***(i) Basic standard***. It is fixed and unaltered for an indefinite period for forward planning. From this basic standard, changes in current standard and actual standard can be measured.

***(ii) Current standard***. It is a short-term standard, as it is revised at regular intervals. it is established for use over a short period of time and is related to current conditions".

***(iii) Normal standard***. It is an average standard, and is based on normal conditions which prevail over a long period of a trade cycle. It is used for planning and decision making during the period of trade cycle to which it is related.

***(iv) Ideal standard***: The standard which can be attained under the most favorable condition possible". It is fixed and needs a high degree of efficiency, best possible conditions of management and performance.

**(v) Expected standard**. It is a practical standard defined as, "the standard which, it is anticipated, can be attained during a future specified budget period". For setting this standard, due weightage is given for all the expected conditions. It is more realistic than the ideal standard.

***(d) Setting the standards***. After choosing the standard, the setting of standard is the work of the standard committee. Standards cost is determined for each element of the following costs.

**(i) Direct Material cost.** Standard material cost is equal to the standard quantity multiplied by the standard price. The setting of standard costs for direct materials involves

***(a) Standard Material Quantity***. For each product or part or the process, mechanical calculation or mechanical analysis is made. The allowance for normal wastage or loss must be fixed very carefully. Similarly, where different kinds of materials are used as a mix for a process, a standard material mix is determined to produce the desire quality product.

***(b) Standard Material Price***. Setting of material standard price is done by the cost accountant and the purchase manager. The current standard is the desirable and effective for fixing the price. Normally one year is the period for fixation of standard price. If there are more fluctuations in prices, then revision of standard price is necessary.

***(ii) Setting standard for Direct Labour***. The standard labour cost is equal to the standard time for each operation multiplied by the standard wage rate. Setting of standard cost of direct labour involves:

(a) Fixation of standard time and (b) Fixation of standard rate

(a) ***Fixation of standard time***: Standard time is fixed by time or motion study or past records or test runs or estimates. Labour time is fixed by the work study engineer. While fixing standard time, normal ideal time is allowed for fatigue, normal delays or other contingencies.

(b) ***Fixation of standard rate***. With the help of the personnel manager, the accountant determines the standard rate. Fixation of standard rate is influenced by (i) Union's policy (ii) Demand for labour (iii) Policy to be followed. (iv) Method of wage payment.

(iii) ***Setting standard for Overhead***. Overheads are divided into fixed, variable and semi-variable. Standard overhead rate is determined on the basis of past records and future trend of prices. It is calculated for a unit or for an hour.

***Standard variable overhead rate***=

Standard variable overhead for the budge Period
----------------------------------------------------------
Budgeted production units or budgeted hours for the budgeted period

***Standard fixed overhead rate***=
Standard overheads for the budget period
-----------------------------------------------------------
Budgeted production units or budgeted hours for the budgeted period

**Revision of Standards**

Standards have to be revised from time to time taking into consideration changing circumstances. The circumstances may change on account of technical innovations, changed market conditions, increase or decrease in plant capacity, developing new products or giving up unprofitable production lines. If variations from actual occur in practice, they may be due to controllable or uncontrollable causes. Standards should be revised only on account of those causes which are beyond the control of the management. Changes in product design, supply of labour and material, changes in market conditions for a long period, trade or cyclical variations would impel the management to revise the standards. The objective, while comparing the actual performance with the standard performance and revising standards, is to facilitate better control over costs and improve the overall working and profitability of the organization.

Apart from the above, basic standards are revised in the course of time under the following circumstances, when:

1. There are permanent changes in the method of production –designs and specifications.
2. Plant capacity is changed
3. There is a large variation between the standard and the actual

# Marginal costing

***Now let's discuss the other technique i.e. marginal costing***

By analyzing the behavior of costs in relation to changes in volume of output it becomes evident that there are some items of costs which tend to vary directly with the volume of output. The cost that vary with volume of output, are called variable cost and those remain unaffected by change in volume of output are fixed cost or period costs. Marginal costing is a study where the effect on profit of changes in the volume and type of output is analyzed.

The cost of one additional unit of output is known as *marginal cost.* In other words, it refers to the cost that is incurred by a business to move from output level 'n' to 'n + 1'. Thus, marginal cost is the cost incurred by a business for the additional output.

**MARGINAL COSTING:** Marginal costing is an accounting technique which ascertains marginal cost of additional output by differentiating between fixed and variable costs. This technique aims to charge only those costs to the cost of additional product that vary directly with sales volumes. Those costs would be direct material, direct labour and factory overhead expenses like supplies and some indirect labour and power. The cost of the additional product would not include fixed or non variable expenses such as depreciation, factory insurance, taxes and supervisory salaries.

Thus, marginal costing is a costing technique that considers only the costs that vary directly with volume—direct materials, direct labour and variable factory overheads and ignores fixed cost in additional output decisions.
The technique of marginal costing lies in
i. differentiation between fixed and variable costs;
ii. Ascertainment of marginal costs; and
iii. Finding out effect on profit due to change in volume or type of output.

Marginal costing, being a technique can be used in combination with other technique such as budgeting and standard costing. It is helpful in determining the profitability of products, departments, processes, and cost centers.

**Let's see some definitions**
According to the Institute of Cost and Management Accountants, London, *"Marginal Costing is the ascertainment, by differentiating between fixed costs and variable costs, of marginal cost and of the effect of profit of changes in the volume or type of output."*

Batty defined Marginal Costing as, *"a technique of cost accounting which pays special attention to the behaviour of costs with changes in the volume of output"*

Kohler's Dictionary for Accounting defines Marginal Costing *"as the ascertainment of marginal or variable costs to an activity department or products as compared with absorption costing or direct costing"*

**Features of Marginal Costing :**The following are the special features of Marginal Costing:

- Marginal costing is a technique of working of costing which is used in conjunction with other methods of costing
- Fixed and variable costs are kept separate at every stage. Semi – Variable costs are also separated into fixed and variable.
- As fixed costs are period costs, they are excluded from product cost or cost of production or cost of sales. Only variable costs are considered as the cost of the product.
- As fixed cost is period cost, they are charged to profit and loss account during the period in which they incurred. They are not carried forward to the next year's income.
- Marginal income or marginal contribution is known as the income or profit.
- The difference between the contribution and fixed costs is the net profit or loss.
- Fixed costs remains constant irrespective of the level of activity.
- Sales price and variable cost per unit remains the same.
- Cost volume profit relationship is fully employed to reveal the state of profitability at various levels of activity.

**Assumptions in Marginal Costing :**The technique of marginal costing is based on the following assumptions:

1. All elements of costs can be divided into fixed and variable.
2. The selling price per unit remains unchanged at all levels of activity.
3. Variable cost per unit remains constant irrespective of level of output and fluctuates directly in proportion to changes in the volume of output.
4. Fixed costs remain unchanged or constant for the entire volume of production.
5. Volume of product is the only factor which influences the costs.

**Advantages of Marginal Costing :**Marginal costing is an important technique of decision making. It is a tool for cost control and profit planning. The following are the advantages and applications of Marginal Costing for an entrepreneur

**1. Profit Planning :**There are four important ways of improving the profit performance of a business: (i) increasing the volume, (ii) increasing the selling price, (iii)Decreasing variable cost, and (iv) decreasing fixed costs. Profit planning is the planning of future operations so as to attain maximum profit. The contribution ratio shows the relative profitability of various sectors of business whenever there is a change in the selling price, variable cost etc.

**2. Introduction Of A New Product :**Sometimes, a product may be added to the existing lines of products with a view to utilise idle facilities, to capture a new market or for any other purpose. The profitability of this new product has to be found out initially. Usually, the new product will be manufactured if it is capable of contributing something toward fixed costs and profit after meeting its variable costs.

**3. Level Of Activity Planning :**Marginal costing is of great help while planning the level of activity. Maximum contribution at a particular level of activity will show the position of maximum profitability.

**4. Key Factor :**A concern would produce and sell only those products which offer maximum profit. This is based on the assumption that it is possible to produce any quantity without any difficulty and sell likewise. However, in actual practice, this seems to be unrealistic as several constraints come in the way of manufacturing as well as selling. Such constraints that come in the way of management's efforts to produce and sell in unlimited quantities are called `key factors' or `limiting factors'. The limiting factors may be materials, labour, plant capacity, or demand. Entrepreneurs must ascertain the extent of the influence of the key factor for ensuring maximisation of profit. Normally, when contribution and key factors are known, the relative profitability of different products or processes can be measured with the help of the following formula:

$$\text{Profitability} = \frac{\text{Contribution}}{\text{Key Factor}}$$

**5. Make Or Buy Decisions :**A company might be having unused capacity which may be utilized for making component parts or similar items instead of buying them from the market. In arriving at such a `make or buy' decision, the cost of manufacturing component parts should be compared with price quoted in the market. If the variable costs are lower than the purchase price, the component parts should be manufactured in the factory itself. Fixed costs are excluded on the assumption that they have been already incurred, and the manufacturing of components involves only variable cost.

**6. Suitable Product Mix/Sales Mix :**Normally, a business concern will select the product mix which gives the maximum profit. Product mix is the ratio in which various products are produced and sold. The marginal costing technique helps management in taking appropriate decisions regarding the product mix, i.e., in changing the ratio of product mix so as to maximise profits. The technique not only helps in dropping unprofitable products from the mix but also helps in dropping unprofitable departments, activities etc.

**7. Pricing Decisions :**Marginal costing techniques help a firm to decide about the prices of various products in a fairly easy manner

**7. Accepting a bulk/ Foreign Order: Marginal** costing technique can also be used to take a decision as to whether to accept a bulk/ foreign offer or not. The speciality of this situation is that normally bulk/ foreign order is requiring the manufacturer to supply the product at a price lower than the usual selling price. Here the decision is taken by comparing the marginal cost of the product with the foreign price offered. If the foreign order offers a price higher than the marginal cost then the offer can be accepted subject to availability of sufficient installed production capacity.

**Limitations of Marginal Costing:** Marginal costing has the following limitations:

***1. Difficulty in classification***: In marginal costing, costs are segregated into Fixed and variable. In actual practice, this classification scheme proves to be Superfluous in that, certain costs may be partly fixed and partly variable and certain other costs may have no relation to volume of output or even with the time. In short, the categorisation of costs into fixed and variable elements is a difficult and tedious job.

***2. Difficulty In Application:*** the marginal costing technique cannot be applied in industries where large stocks in the form of work-in-progress (job and contracting firms) are maintained.

***3. Defective Inventory Valuation***: under marginal costing, fixed costs are not included in the value of finished goods and work in progress. As fixed costs are also incurred, these should form part of the cost of the product. By eliminating fixed costs from finished stock and work-in-progress, marginal costing techniques present stocks at less than their true value.

**4. Wrong Basis For Pricing:** In marginal costing, sales prices are arrived at on the basis of contribution alone. This is an objectionable practice. For example, in the long run, the selling price should not be fixed on the basis of contribution alone as it may result in losses or low profits. Other important factors such as fixed costs, capital employed should also be taken into account while fixing selling prices. Further, it is also not correct to lay more stress on selling function, as is done in marginal costing, and relegate production function to the background.

***5. Limited Scope:*** The utility of marginal costing is limited to short-run profit planning and decision-making. For decisions of far-reaching importance, one is interested in special purpose cost rather than variable cost. Important decisions on several occasions depend on non-cost considerations also, which are thoroughly discounted in marginal costing.

In view of these limitations, marginal costing needs to be applied with necessary care and caution. Fruitful results will emerge only when management tries to apply the technique in combination with other useful techniques such as budgetary control and standard costing.

*We shall discuss the practical applications of marginal costing in the Chapter on* ***"Break even Analysis"***

***I hope you are now able to understand the concept of standard costing and Marginal costing***

***Thanks for your kind attention!***

**E – CONTENT**

# 8 (C): STANDARD AND MARGINAL COSTING

## SUMMARY

The Concept of standard costing and Marginal costing is an important aspect to be considered by an entrepreneur in order to plan and control the various types of cost and for the optimum utilisation of resources.

Standard Costing is the preparation and use of Standard Cost, their comparison with actual costs, and the analysis of variances to their causes and points of incidence. The study of standard cost comprises of: a) Ascertainment and use of standard costs b) Comparison of actual costs with standard costs and measuring the variances c) Controlling costs by the variance analysis and d) Reporting to management for taking proper action to maximize the efficiency.

Marginal costing is an accounting technique which ascertains marginal cost of additional output by differentiating between fixed and variable costs. This technique aims to charge only those costs to the cost of additional product that vary directly with sales volumes. Those costs would be direct material, direct labour and factory overhead expenses like supplies and some indirect labour and power. The cost of the additional product would not include fixed or non variable expenses such as depreciation, factory insurance, taxes and supervisory salaries.

The technique of marginal costing lies in a) differentiation between fixed and variable costs b) Ascertainment of marginal costs; and c) Finding out effect on profit due to change in volume or type of output.

Marginal costing, being a technique can be used in combination with other technique such as budgeting and standard costing. It is helpful in determining the profitability of products, departments, processes, and cost centers.

## OBJECTIVES

Upon successful completion of this module, students will be able to:

- *Define and understand the concepts of Standard cost and standard Costing*
- *Understand the applications of Standard Costing as a Controlling Technique*
- *Understand the advantages and disadvantages of Standard Costing*
- *Comprehend the process of Setting the Standard*
- *Understand the applications of Marginal Costing*
- *Understand the advantages and limitations of Marginal Costing*

## Frequently Asked Questions

**1. What are the various objectives of standard costing?**

The various objectives of standard costing technique are:

7. To provide a formal basis for assessing performance and efficiency.
8. To control costs by establishing standards and analyzing of variances.
9. To enable the principle of 'management by exception' to be practiced at the operational level.
10. To assist in setting budgets
11. Assigning cost to materials, work-in-process and finished goods inventories.
12. Forms basis for establishing bids and contracts and for fixing selling prices.

**2. What are the advantages of Standard Costing?**

A good standard costing system results in the following advantages:

11. Use of standard costing leads to optimum utilization of men, material, and resource.
12. Budgets are compiled from standards.
13. Its use provides a yardstick for comparison of actual cost performance.
14. Areas of strengths and weakness are highlighted
15. It acts as a form of feed forward control that allows an organization to plan the manufacturing inputs required for different levels of output.
16. It operates via the management by exception principle where only those variances (i.e. Differences between actual and expected results) which are outside certain tolerance limits are investigated, thereby saving managerial time.
17. It motivates workers to strive for accomplishment of defined targets.
18. It is very useful to management in discharging functions, like planning, control, and decision-making and price fixation.
19. It creates an atmosphere of cost consciousness
20. Its introduction leads to simplification of procedures and standardization of products.

**3. What are the Limitations of Standard Costing?**

Following are the limitations of standard costing;

8. A lot of input data is required which can be expensive
9. Unless standards are accurately set any performance evaluation will be meaningless.
10. Uncertainty in standard costing can be caused by inflation, technological change, economic and political factors, etc. Standards therefore need to be continually updated and revised.
11. The maintenance of the cost data base is expensive.
12. Setting of standards involves forecasting and subjective judgments with inherent possibilities of error and ambiguity.
13. Standard costing cannot be adopted in the firms which do not have uniform and standard production programme.
14. It is very difficult to predict controllable and uncontrollable variances.

4. **Discuss various applications of Standard Costing as a Controlling Technique**

   The technique of standard costing is used for building a proper budgeting and feedback system. The various applications of standard costing to management are as follows.

   a. ***Formulation of Price and Production Policies :*** Standard Costing acts as a valuable guide to management in the fixation of price and formulation production polices.
   b. ***Comparison and Analysis of Data: Standard*** Costing provides a stable basis for comparison of actual with standard costs. It brings out the impact of external factors and internal causes on the cost and performance of the concern.
   c. ***Cost Consciousness:*** An atmosphere of cost consciousness is created among the staff. Standard costing also provides incentive to workers for efficient performance.
   d. ***Better Capacity to Anticipate:*** An effective budget can be formulated for the future by having price knowledge of the deviations of actual costs from standard costs.
   e. ***Better Economy, Efficiency and Productivity: Men***, machines and materials are more effectively utilized and thus benefits of economies can be reaped in business together with increased productivity.
   f. ***Delegation of Authority and Responsibility: The*** net profit is analyzed and responsibility can be placed on the person in charge for any variations from the standards. It discloses adverse variations and particular cost centre can be held accountable.
   g. ***Management by 'Exception':*** The principle of "management by exception' can be applied in the business. This helps the management in concentrating its attention on cases which are off standard, i.e., below or above the standard set.

5. **Explain the steps involved in setting standards**

   The various steps involved in setting standards are as under

a. Establish Standard Committee comprising Purchase Manager, Personnel Manager, and Production Manager.
b. Study the existing costing system, cost records and forms in use.
c. A technical survey of the existing methods of production should be undertaken.
d. Determine the type of standard to be used.
e. Fix standard for each element of cost.
f. Determine standard costs of each product.

g. Fix the responsibility for setting standards.

h. Account variances properly.

i. Ascertain the deviations by comparing the actual with standards.

j. Take necessary action to ensure that adverse variances are not repeated.

## 6. Define Marginal costing and discuss its features

Marginal costing is an accounting technique which ascertains marginal cost of additional output by differentiating between fixed and variable costs. This technique aims to charge only those costs to the cost of additional product that vary directly with sales volumes. Those costs would be direct material, direct labour and factory overhead expenses like supplies and some indirect labour and power.

**Features of Marginal Costing :**The following are the special features of Marginal Costing:

- It's a technique of costing which is used in conjunction with other methods of costing
- Fixed and variable costs are kept separate at every stage. Semi – Variable costs are also separated into fixed and variable.
- As fixed costs are period costs, they are excluded from product cost or cost of production or cost of sales. Only variable costs are considered as the cost of the product.
- As fixed cost is period cost, they are charged to profit and loss account during the period in which they incurred. They are not carried forward to the next year's income.
- Marginal income or marginal contribution is known as the income or profit.
- The difference between the contribution and fixed costs is the net profit or loss.
- Fixed costs remains constant irrespective of the level of activity.
- Sales price and variable cost per unit remains the same.
- Cost volume profit relationship is fully employed to reveal the state of profitability at various levels of activity.

## 7. Discuss the advantages of Marginal Costing

Marginal costing is an important technique of decision making. It is a tool for cost control and profit planning. The following are the advantages and applications of Marginal Costing for an entrepreneur

a. **Profit Planning :** Profit planning is the planning of future operations so as to attain maximum profit. The contribution ratio shows the relative profitability of various sectors of business whenever there is a change in the selling price, variable cost etc.
b. **Introduction Of A New Product :** Sometimes, a product may be added to the existing lines of products with a view to utilise idle facilities, to capture a new market or for any other purpose. The profitability of this new product has to be found out initially.
c. **Level Of Activity Planning :**Marginal costing is of great help while planning the level of activity. Maximum contribution at a particular level of activity will show the position of maximum profitability.
d. **Key Factor :**A concern would produce and sell only those products which offer maximum profit. This is based on the assumption that it is possible to produce any quantity without any difficulty and sell likewise. Such constraints that come in the way of management's efforts to produce and sell in unlimited quantities are called `key factors' or `limiting factors'.
e. **Make Or Buy Decisions :**A company might be having unused capacity which may be utilized for making component parts or similar items instead of buying them from the market. In arriving at such a `make or buy' decision, the cost of manufacturing component parts should be compared with price quoted in the market. If the variable costs are lower than the purchase price, the component parts should be manufactured in the factory itself.

f. **Suitable Product Mix/Sales Mix :** Normally, a business concern will select the product mix which gives the maximum profit. Product mix is the ratio in which various products are produced and sold. The marginal costing technique helps management in taking appropriate decisions regarding the product mix, i.e., in changing the ratio of product mix so as to maximise profits.

g. **Pricing Decisions :**Marginal costing techniques help a firm to decide about the prices of various products in a fairly easy manner

h. **Accepting a bulk/ Foreign Order: Marginal** costing technique can also be used to take a decision as to whether to accept a bulk/ foreign offer or not. The speciality of this situation is that normally bulk/ foreign order is requiring the manufacturer to supply the product at a price lower than the usual selling price. Here the decision is taken by comparing the marginal cost of the product with the foreign price offered.

**8. Discuss the various Limitations of Marginal Costing**

Marginal costing has the following limitations:

a. ***Difficulty in classification***: In marginal costing, costs are segregated into Fixed and variable. In actual practice, this classification scheme proves to be Superfluous in that, certain costs may be partly fixed and partly variable and certain other costs may have no relation to volume of output or even with the time.

b. ***Difficulty In Application:*** the marginal costing technique cannot be applied in industries where large stocks in the form of work-in-progress (job and contracting firms) are maintained.
c. ***Defective Inventory Valuation***: under marginal costing, fixed costs are not included in the value of finished goods and work in progress. As fixed costs are also incurred, these should form part of the cost of the product. By eliminating fixed costs from finished stock and work-in-progress, marginal costing techniques present stocks at less than their true value.
d. **Wrong Basis For Pricing:** In marginal costing, sales prices are arrived at on the basis of contribution alone. This is an objectionable practice. For example, in the long run, the selling price should not be fixed on the basis of contribution alone as it may result in losses or low profits.
e. ***Limited Scope:*** The utility of marginal costing is limited to short-run profit planning and decision-making. For decisions of far-reaching importance, one is interested in special purpose cost rather than variable cost.

**QUIZ**

**Indicate whether the following statements are true or false:**

1. Fixed cost remains constant to a particular level of output.
   **a) True**
   b) False
2. Variable cost has tendency to change proportionately with the volume of output.
   **a) True**
   b) False

3. Marginal cost is a change in total cost as a result of additional output.
   **a) True**
   b) False

4. Marginal costing is a costing technique that considers both variable and fixed cost in additional output decisions.
   a) True
   **b) False**

5. Marginal costing as managerial tool uses the decision criteria which are generally based on cost minimization, profit maximization and contribution maximization.
   **a) True**
   b) False

**Choose the correct answer from the following:**

1. The cost that change with the output but not proportionately it is referred to as
a) fixed cost
b) variable cost
**c) semi-variable cost**
d) Standard Cost

2. Fixed costs have tendency to
a) change proportionately with the volume of output
**b) remain constant up to a particular level of output**
c) change disproportionately with the volume of output
d) remain constant at all levels of output.

3. Marginal cost is a change in total cost as a result of
a) increase in output capacity
**b) additional output**
c) both (a) and (b) above
d) none of the above

4. Marginal costing considers costs like
**a) variable costs**
b) fixed costs
c) both (a) and (b) above

d) Semi-variable costs

5. Contribution is utilized for meeting
a) fixed costs
**b) expected profit**
c) both (a) and (b) above
d) variable costs

6. Marginal costing is managerial tool based on
a) cost minimization
b) profit maximization
c) contribution maximization
**d) all of the above**

7. Scarce resources decisions are based on
a) availability of resources other than key factor
**b) profitability of the key factor**
c) both (a) and (b) above
d) none of the above

**GLOSSARY**

**Standard**: “Standard is a desired attainable objective, a performance, a goal, a model”.

**Standard Cost**: Standard cost is a predetermined estimate of cost to manufacture a single unit or a number of units during a future period.

**Standard Costing**: It is the preparation and use of Standard Cost, their comparison with actual costs, and the analysis of variances to their causes and points of incidence.

**Cost centre** A cost centre is a location, person or item of equipment for which costs may be ascertained and used of the purpose of cost control. With the help of cost centre, the standards are prepared and the variances are analyzed.

**Basic standard.** It is fixed and unaltered for an indefinite period for forward planning. From this basic standard, changes in current standard and actual standard can be measured.

**Current standard.** It is a short-term standard, as it is revised at regular intervals. it is established for use over a short period of time and is related to current conditions”.

**Normal standard**. It is an average standard, and is based on normal conditions which prevail over a long period of a trade cycle. It is used for planning and decision making during the period of trade cycle to which it is related.

**Ideal standard**: The standard which can be attained under the most favorable condition possible". It is fixed and needs a high degree of efficiency, best possible conditions of management and performance.

**Marginal costing:** Marginal costing is an accounting technique which ascertains marginal cost of additional output by differentiating between fixed and variable costs. This technique aims to charge only those costs to the cost of additional product that vary directly with sales volumes.

**Key Factor :**A concern would produce and sell only those products which offer maximum profit. This is based on the assumption that it is possible to produce any quantity without any difficulty and sell likewise. However, in actual practice, this seems to be unrealistic as several constraints come in the way of manufacturing as well as selling. Such constraints that come in the way of management's efforts to produce and sell in unlimited quantities are called `key factors' or `limiting factors'.

**ASSIGNMENT**

1) Define Standard cost and discuss the objectives of standard costing
2) Explain the advantages and limitations of standard costing
3) Discuss the applications of Standard Costing as a Controlling Technique
4) Define Marginal costing and discuss its features
5) Describe the advantages and limitations of marginal costing

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# E – CONTENT

# 8 (C): STANDARD AND MARGINAL COSTING

**SUMMARY**

The Concept of standard costing and Marginal costing is an important aspect to be considered by an entrepreneur in order to plan and control the various types of cost and for the optimum utilisation of resources.

Standard Costing is the preparation and use of Standard Cost, their comparison with actual costs, and the analysis of variances to their causes and points of incidence. The study of standard cost comprises of: a) Ascertainment and use of standard costs b) Comparison of actual costs with standard costs and measuring the variances c) Controlling costs by the variance analysis and d) Reporting to management for taking proper action to maximize the efficiency.

Marginal costing is an accounting technique which ascertains marginal cost of additional output by differentiating between fixed and variable costs. This technique aims to charge only those costs to the cost of additional product that vary directly with sales volumes. Those costs would be direct material, direct labour and factory overhead expenses like supplies and some indirect labour and power. The cost of the additional product would not include fixed or non variable expenses such as depreciation, factory insurance, taxes and supervisory salaries.

The technique of marginal costing lies in a) differentiation between fixed and variable costs b) Ascertainment of marginal costs; and c) Finding out effect on profit due to change in volume or type of output.

Marginal costing, being a technique can be used in combination with other technique such as budgeting and standard costing. It is helpful in determining the profitability of products, departments, processes, and cost centers.

**OBJECTIVES**

Upon successful completion of this module, students will be able to:

- *Define and understand the concepts of Standard cost and standard Costing*
- *Understand the applications of Standard Costing as a Controlling Technique*
- *Understand the advantages and disadvantages of Standard Costing*
- *Comprehend the process of Setting the Standard*
- *Understand the applications of Marginal Costing*
- *Understand the advantages and limitations of Marginal Costing*

**Frequently Asked Questions**

**9. What are the various objectives of standard costing?**

The various objectives of standard costing technique are:

13. To provide a formal basis for assessing performance and efficiency.
14. To control costs by establishing standards and analyzing of variances.
15. To enable the principle of 'management by exception' to be practiced at the operational level.
16. To assist in setting budgets
17. Assigning cost to materials, work-in-process and finished goods inventories.
18. Forms basis for establishing bids and contracts and for fixing selling prices.

**10. What are the advantages of Standard Costing?**

A good standard costing system results in the following advantages:

21. Use of standard costing leads to optimum utilization of men, material, and resource.

22. Budgets are compiled from standards.
23. Its use provides a yardstick for comparison of actual cost performance.

24. Areas of strengths and weakness are highlighted
25. It acts as a form of feed forward control that allows an organization to plan the manufacturing inputs required for different levels of output.
26. It operates via the management by exception principle where only those variances (i.e. Differences between actual and expected results) which are outside certain tolerance limits are investigated, thereby saving managerial time.
27. It motivates workers to strive for accomplishment of defined targets.
28. It is very useful to management in discharging functions, like planning, control, and decision-making and price fixation.
29. It creates an atmosphere of cost consciousness
30. Its introduction leads to simplification of procedures and standardization of products.

**11. What are the Limitations of Standard Costing?**

Following are the limitations of standard costing;

15. A lot of input data is required which can be expensive
16. Unless standards are accurately set any performance evaluation will be meaningless.
17. Uncertainty in standard costing can be caused by inflation, technological change, economic and political factors, etc. Standards therefore need to be continually updated and revised.
18. The maintenance of the cost data base is expensive.
19. Setting of standards involves forecasting and subjective judgments with inherent possibilities of error and ambiguity.
20. Standard costing cannot be adopted in the firms which do not have uniform and standard production programme.
21. It is very difficult to predict controllable and uncontrollable variances.

## 12. Discuss various applications of Standard Costing as a Controlling Technique

The technique of standard costing is used for building a proper budgeting and feedback system. The various applications of standard costing to management are as follows.

h. ***Formulation of Price and Production Policies :*** Standard Costing acts as a valuable guide to management in the fixation of price and formulation production polices.

i. ***Comparison and Analysis of Data: Standard*** Costing provides a stable basis for comparison of actual with standard costs. It brings out the impact of external factors and internal causes on the cost and performance of the concern.

j. ***Cost Consciousness:*** An atmosphere of cost consciousness is created among the staff. Standard costing also provides incentive to workers for efficient performance.

k. ***Better Capacity to Anticipate:*** An effective budget can be formulated for the future by having price knowledge of the deviations of actual costs from standard costs.

l. ***Better Economy, Efficiency and Productivity: Men***, machines and materials are more effectively utilized and thus benefits of economies can be reaped in business together with increased productivity.

m. ***Delegation of Authority and Responsibility: The*** net profit is analyzed and responsibility can be placed on the person in charge for any variations from the standards. It discloses adverse variations and particular cost centre can be held accountable.

n. ***Management by 'Exception':*** The principle of "management by exception' can be applied in the business. This helps the management in concentrating its attention on cases which are off standard, i.e., below or above the standard set.

## 13. Explain the steps involved in setting standards

The various steps involved in setting standards are as under

k. Establish Standard Committee comprising Purchase Manager, Personnel Manager, and Production Manager.
l. Study the existing costing system, cost records and forms in use.
m. A technical survey of the existing methods of production should be undertaken.
n. Determine the type of standard to be used.
o. Fix standard for each element of cost.
p. Determine standard costs of each product.

q. Fix the responsibility for setting standards.

r. Account variances properly.

s. Ascertain the deviations by comparing the actual with standards.

t. Take necessary action to ensure that adverse variances are not repeated.

### 14. Define Marginal costing and discuss its features

Marginal costing is an accounting technique which ascertains marginal cost of additional output by differentiating between fixed and variable costs. This technique aims to charge only those costs to the cost of additional product that vary directly with sales volumes. Those costs would be direct material, direct labour and factory overhead expenses like supplies and some indirect labour and power.

**Features of Marginal Costing :**The following are the special features of Marginal Costing:

- It's a technique of costing which is used in conjunction with other methods of costing
- Fixed and variable costs are kept separate at every stage. Semi – Variable costs are also separated into fixed and variable.
- As fixed costs are period costs, they are excluded from product cost or cost of production or cost of sales. Only variable costs are considered as the cost of the product.
- As fixed cost is period cost, they are charged to profit and loss account during the period in which they incurred. They are not carried forward to the next year's income.
- Marginal income or marginal contribution is known as the income or profit.
- The difference between the contribution and fixed costs is the net profit or loss.
- Fixed costs remains constant irrespective of the level of activity.
- Sales price and variable cost per unit remains the same.
- Cost volume profit relationship is fully employed to reveal the state of profitability at various levels of activity.

### 15. Discuss the advantages of Marginal Costing

Marginal costing is an important technique of decision making. It is a tool for cost control and profit planning. The following are the advantages and applications of Marginal Costing for an entrepreneur

i. **Profit Planning :** Profit planning is the planning of future operations so as to attain maximum profit. The contribution ratio shows the relative profitability of various sectors of business whenever there is a change in the selling price, variable cost etc.
j. **Introduction Of A New Product :** Sometimes, a product may be added to the existing lines of products with a view to utilise idle facilities, to capture a new market or for any other purpose. The profitability of this new product has to be found out initially.
k. **Level Of Activity Planning :**Marginal costing is of great help while planning the level of activity. Maximum contribution at a particular level of activity will show the position of maximum profitability.
l. **Key Factor :**A concern would produce and sell only those products which offer maximum profit. This is based on the assumption that it is possible to produce any quantity without any difficulty and sell likewise. Such constraints that come in the way of management's efforts to produce and sell in unlimited quantities are called `key factors' or `limiting factors'.
m. **Make Or Buy Decisions :**A company might be having unused capacity which may be utilized for making component parts or similar items instead of buying them from the market. In arriving at such a `make or buy' decision, the cost of manufacturing component parts should be compared with price quoted in the market. If the variable costs are lower than the purchase price, the component parts should be manufactured in the factory itself.

n. **Suitable Product Mix/Sales Mix :** Normally, a business concern will select the product mix which gives the maximum profit. Product mix is the ratio in which various products are produced and sold. The marginal costing technique helps management in taking appropriate decisions regarding the product mix, i.e., in changing the ratio of product mix so as to maximise profits.

o. **Pricing Decisions :**Marginal costing techniques help a firm to decide about the prices of various products in a fairly easy manner

p. **Accepting a bulk/ Foreign Order: Marginal** costing technique can also be used to take a decision as to whether to accept a bulk/ foreign offer or not. The speciality of this situation is that normally bulk/ foreign order is requiring the manufacturer to supply the product at a price lower than the usual selling price. Here the decision is taken by comparing the marginal cost of the product with the foreign price offered.

**16. Discuss the various Limitations of Marginal Costing**

Marginal costing has the following limitations:

f. ***Difficulty in classification***: In marginal costing, costs are segregated into Fixed and variable. In actual practice, this classification scheme proves to be Superfluous in that, certain costs may be partly fixed and partly variable and certain other costs may have no relation to volume of output or even with the time.

g. ***Difficulty In Application:*** the marginal costing technique cannot be applied in industries where large stocks in the form of work-in-progress (job and contracting firms) are maintained.
h. ***Defective Inventory Valuation***: under marginal costing, fixed costs are not included in the value of finished goods and work in progress. As fixed costs are also incurred, these should form part of the cost of the product. By eliminating fixed costs from finished stock and work-in-progress, marginal costing techniques present stocks at less than their true value.
i. **Wrong Basis For Pricing:** In marginal costing, sales prices are arrived at on the basis of contribution alone. This is an objectionable practice. For example, in the long run, the selling price should not be fixed on the basis of contribution alone as it may result in losses or low profits.
j. ***Limited Scope:*** The utility of marginal costing is limited to short-run profit planning and decision-making. For decisions of far-reaching importance, one is interested in special purpose cost rather than variable cost.

**QUIZ**

**Indicate whether the following statements are true or false:**

1. Fixed cost remains constant to a particular level of output.
   - **c) True**
   - d) False

2. Variable cost has tendency to change proportionately with the volume of output.
   - **c) True**
   - d) False

3. Marginal cost is a change in total cost as a result of additional output.
   - **c) True**
   - d) False

4. Marginal costing is a costing technique that considers both variable and fixed cost in additional output decisions.
   - c) True
   - **d) False**

5. Marginal costing as managerial tool uses the decision criteria which are generally based on cost minimization, profit maximization and contribution maximization.
   - **c) True**
   - d) False

**Choose the correct answer from the following:**

1. The cost that change with the output but not proportionately it is referred to as
a) fixed cost
b) variable cost
**c) semi-variable cost**
d) Standard Cost

2. Fixed costs have tendency to
a) change proportionately with the volume of output
**b) remain constant up to a particular level of output**
c) change disproportionately with the volume of output
d) remain constant at all levels of output.

3. Marginal cost is a change in total cost as a result of
a) increase in output capacity
**b) additional output**
c) both (a) and (b) above
d) none of the above

4. Marginal costing considers costs like
**a) variable costs**
b) fixed costs
c) both (a) and (b) above

d) Semi-variable costs

5. Contribution is utilized for meeting
a) fixed costs
**b) expected profit**
c) both (a) and (b) above
d) variable costs

6. Marginal costing is managerial tool based on
a) cost minimization
b) profit maximization
c) contribution maximization
**d) all of the above**

7. Scarce resources decisions are based on
a) availability of resources other than key factor
**b) profitability of the key factor**
c) both (a) and (b) above
d) none of the above

## GLOSSARY

**Standard**: "Standard is a desired attainable objective, a performance, a goal, a model".

**Standard Cost**: Standard cost is a predetermined estimate of cost to manufacture a single unit or a number of units during a future period.

**Standard Costing**: It is the preparation and use of Standard Cost, their comparison with actual costs, and the analysis of variances to their causes and points of incidence.

**Cost centre** A cost centre is a location, person or item of equipment for which costs may be ascertained and used of the purpose of cost control. With the help of cost centre, the standards are prepared and the variances are analyzed.

**Basic standard.** It is fixed and unaltered for an indefinite period for forward planning. From this basic standard, changes in current standard and actual standard can be measured.

**Current standard.** It is a short-term standard, as it is revised at regular intervals. it is established for use over a short period of time and is related to current conditions".

**Normal standard**. It is an average standard, and is based on normal conditions which prevail over a long period of a trade cycle. It is used for planning and decision making during the period of trade cycle to which it is related.

**Ideal standard**: The standard which can be attained under the most favorable condition possible". It is fixed and needs a high degree of efficiency, best possible conditions of management and performance.

**Marginal costing:** Marginal costing is an accounting technique which ascertains marginal cost of additional output by differentiating between fixed and variable costs. This technique aims to charge only those costs to the cost of additional product that vary directly with sales volumes.

**Key Factor :**A concern would produce and sell only those products which offer maximum profit. This is based on the assumption that it is possible to produce any quantity without any difficulty and sell likewise. However, in actual practice, this seems to be unrealistic as several constraints come in the way of manufacturing as well as selling. Such constraints that come in the way of management's efforts to produce and sell in unlimited quantities are called `key factors' or `limiting factors'.

**ASSIGNMENT**

6) Define Standard cost and discuss the objectives of standard costing
7) Explain the advantages and limitations of standard costing
8) Discuss the applications of Standard Costing as a Controlling Technique
9) Define Marginal costing and discuss its features
10) Describe the advantages and limitations of marginal costing

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## Topic: 9 (a) Budgets – Budgetary Controls

***Hello friends***

*In this program we are going to discuss about the Concept of Budget, Budgeting and Budgetary Control, which is an important area to be taken care of by an entrepreneur in order to plan and control the various business activities*

As you may be aware of that in order to achieve the organizational objectives, an enterprise should be managed effectively and efficiently. It is facilitated by chalking out the course of action in advance. Planning, the primary function of management helps to chalk out the course of actions in advance. But planning is to be followed by continuous comparison of the actual performance with the planned performance, i. e., controlling. One systematic approach in effective follow up process is budgeting. Different budgets are prepared by the enterprise for different purposes. Thus, budgeting is an integral part of management.
The subject experts of this program are Dr. Naseeb Ahmad and Dr. Asheref Illiyan.

**Dr. Naseeb Ahmad** is Honorary Deputy Director, Centre for Innovation & Entrepreneurship & Associate Professor, Department of Commerce and Business Studies, Jamia Millia Islamia (Central University), New Delhi. He is having experience of about 17 years as a teacher and researcher in the area of Entrepreneurship & Finance. He has organised more than 50 Entrepreneurship Development Programs, workshops, seminars, events in the area of Innovation & Entrepreneurship.

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First of all let's understand the concept of Budget with the help of some important definitions:

According to **Fremgen, James M:** "A budget is a comprehensive and coordinated plan, expressed in financial terms, for the operations and resources of an enterprise for some specific period in the future‟.

**Gordon and Shillinglaw** defined "budget as a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance‟.

**According to the Chartered Institute of Management Accountants, London: "**A budget is a financial and/or quantitative statement, prepared prior to a defined period of time, of the policy to be pursued during the period for the purpose of attaining a given objective‟.

On the basis of these definitions we can say that budget is :-

1. A comprehensive and coordinated plan of action.
2. A plan for the firm's operations and resources.

3. Based on objectives to be attained.

4. Related to specific future period.

5. Expressed in financial and/or physical units.

**Now let's discuss the various Types/ Classification of Budgets**

**There are various types of Budgets prepared by a Business organizations depending upon the nature of business. We can classify the various budgets in 3 categories i.e.**

1. *According to time:*
2. *According to function:*
3. *According to Flexibility:*

Now let's discuss the various types of Budget under each category

1. ***According to time: there are 4 types of budget under this category i.e.***

   I. Long term Budget: it is designed for a long period, generally 5 to 10 years, concerned with the planning of the operations of a firm over a considerably long period of time.

   II. Short term Budget : it is prepared for a period generally not exceeding 5 yrs.

   III. Current budgets: this type of budget covers a very short period, say a month or a quarter. They are essentially short term budgets adjusted to current conditions.

   IV. Rolling Budgets: A new budget is prepared at the end of each month or quarter for a full year ahead. The figures for the month or quarter which has rolled down, are dropped and the figures for the next month or quarter are added.

2. ***According to function: the following budgets comes under this category;***

I. *Sales Budget*: Sales budget is the most important budget for a business firm. It is the basis for the preparation of other budgets sales budget is a forecast of sales to be achieved in a budget period. The following factors are taken into consideration while preparing sales budget:

a. Past sales figures and trend

b. Salesmen's estimates

c. Plant capacity

d. General trade position

e. Orders in hand

f. Proposed expansion

g. Seasonal fluctuations

h. Market demand

i. Availability of raw materials and other supplies

j. Financial position

k. Nature of competition

l. Cost of distribution

m. Government controls and regulations

n. Political situation.

II. *Production Budget: It* provides an estimate of the total volume of production product-wise, with the scheduling of operations by days, weeks and months and a forecast of the closing finished product inventory.

III. *Cost of Production Budget: This* budget forecasts the cost of production. Separate budgets may also be prepared for each element of costs such as direct materials budgets, direct labour budget, factory materials budgets, office overheads budget, selling and distribution overheads budget, etc.

IV. *Human Resource/ Personnel Budget* The budget that anticipates the quantity of personnel required during a period for production activity is known as Personnel/ human resource Budget.

V. *Purchase Budget:* It forecasts the quantity and value of purchases required for production.

VI. *Capital Expenditure Budget :* this budget forecasts the amount of capital that may be required for procurement of capital assets during the budget period.

VII. *Cash Budget:* It is an estimate of cash receipts and disbursements/ payments during a future period of time. The Cash Budget is an analysis of flow of cash in a business over a future, short or long period of time. It forecasts the estimated amount of cash receipts and payments and the likely cash balance in hand at the end of different periods. A cash budget helps the management in i) Determining the future cash needs of the firm, ii) Planning for financing of those needs and iii) Exercising control over cash and liquidity of the firm.

***As cash budget is of great significance for an entrepreneur, let's discuss the Procedure for Preparation of Cash Budget***

1. First of all we take into account the opening cash balance, if any, for the beginning of the period for which the cash budget is to be prepared.

2. Then Cash receipts from various sources are estimated. It may be from cash sales, cash collections from debtors/bills receivables, dividends, interest on investments, sale of assets, etc.

3. The Cash payments for various disbursements are also estimated. It may be for cash purchases, payment to creditors/bills payables, payment to revenue and capital expenditure, creditors for expenses, etc.

4. The estimated cash receipts are added to the opening cash balance, if any.
5. The estimated cash payments are deducted from the above proceeds.
6. The balance, if any, is the closing cash balance of the month concerned.
7. The closing cash balance is taken as the opening cash balance of the following month.
8. Then the process is repeatedly performed.
9. If the closing balance of any month is negative i.e the estimated cash payments exceed estimated cash receipts, then overdraft facility may also be arranged suitably.

VIII. *Master Budget :* The master budget sets out a firm's plan for the operations and resources expressed in financial terms for a given period. It is a summary of the budget schedules in capsule form made for the purpose of presenting in one report the highlights of the budget period. Thus, the master budget is an overall budget of a firm which includes all other small departmental budgets. It is network consisting of many separate budgets that are interdependent. In fact, the master budget contains consolidated summary of all the budgets prepared by the organization.

***Now let's see about the Preparation of a Master Budget:***

It is a complex process that requires much time and effort by the management at all levels. It includes the preparation of a projected profit and loss account (income statement) and projected balance sheet. The preparation of master budget involves the preparation of:

i. sales budget;

ii. production cost budget;

iii. cost budget;

iv. cash budget;

v. projected profit and loss account on the basis of information collected from the above stated steps; and

vi. projected balance sheet from the information available in last year's balance sheet and with the help of the steps stated above.

***3. According to Flexibility: There are 2 types of budgets i.e. Fixed Budget & Flexible Budget***

I. Fixed Budget : a fixed budget is a budget which is designed to remain unchanged irrespective of the level of activity actually attained. Hence it is unrealistic yardstick in case the level of activity actually attained does not conform to the one assumed for budgeting purposes.

II. Flexible Budget : a flexible budget is , ' a budget designed to change in accordance to the level of activity actually attained'. It is, also called a variable budget, which is a financial plan of estimated revenues and expenses based on the current actual amount of output. In other words, a flexible budget uses the revenues and expenses produced in the current production as a baseline and estimates how the revenues and expenses will change based on changes in the output.

***Let's see the key differences between fixed budget and flexible budget to understand it better***

The following are the major differences between fixed budget and flexible budget:

1. The budget, which remains constant, regardless of the actual output levels is known as Fixed Budget. The flexible budget is a budget which can be easily adjusted according to the output levels.
2. Fixed Budget is static in nature while Flexible Budget is dynamic.
3. Fixed Budget operates in only one activity level, but Flexible Budget can be operated on multiple levels of output.
4. Fixed Budget is based on the assumption, whereas Flexible Budget is realistic.
5. Fixed Budget is inelastic, as it cannot be re-casted as per the actual output. Conversely, the Flexible budget is elastic because it can be easily adjusted according to the volume of the production.
6. Flexible Budget proves more accurate to evaluate the performance, capacity and efficiency of the activity level compared to Fixed Budget.

So we can say that Fixed Budget is mainly based on assumptions which are unrealistic and so this is not applicable to business concerns, but if we talk about Flexible Budget, it is more practicable. Cost Ascertainment is also not possible in case of fixed budget if the actual and budgeted levels of activity vary and the same can be easily determined in the case of a flexible budget

***The following important points must be borne in mind while preparing budget:***

1. Budgets are prepared to achieve the objectives of the business. No useful budget can be prepared without a complete knowledge of the objectives, nature and policies of the business.
2. The duration of the budget must be determined according to the special circumstances of each business. Ordinarily, every company needs both short-term as well as long-term budgets. Short term budgets are usually in the form of income, expenditure, cash and sales. Similarly, the examples of long-term budgets are capital expenditure, training of business personnel, and expansion of the business.
3. Adequate, accurate and reliable statistical information must be available for the preparation of a good budget. Past experience helps in projecting future.
4. Budget must be reasonably elastic and flexible. It must be capable of being adjusted and changed according to new changes.

**Now let's discuss the concept of Budgeting:**

Budgeting is the process of preparing and using budgets to achieve management objectives. It is the systematic approach for accomplishing the planning, coordination, and control responsibilities of management by optimally utilizing the given resources.
Simply the entire process of preparing the budgets is known as Budgeting‟

*let's see what are the various Elements of Budgeting:*

1. A good budgeting should state clearly the firm's expectations and facilitate their attainability.

2. A good budgeting system should utilize various persons at different levels while preparing the budgets.

3. The authority and responsibility should be properly fixed.

4. Realistic targets are to be fixed.

5. A good system of accounting is also essential.

6. Wholehearted support of the top management is necessary.

7. Budgeting education is to be imparted among the employees.

8. Proper reporting system should be introduced.

9. Availability of working capital is to be ensured.

***Finally let's discuss about Budgetary Control***

**We can understand it with the help of some important Definitions of Budgetary Control:**

**CIMA, London** defines budgetary control as, "the establishment of the budgets relating to the responsibility of executives to the requirements of a policy and the continuous comparison of actual with budgeted result either to secure by individual action the objectives of that policy or to provide a firm basis for its revision"

According to **Wheldon, "**Budgetary Control is a planning in advance of the various functions of a business so that the business as a whole is controlled".

**Brown and Howard have defined** Budgetary Control as "a system of controlling costs which includes the preparation of budgets, coordinating the department and establishing responsibilities, comprising actual performance with the budgeted and acting upon results to achieve maximum profitability".

**The various elements of budgetary control are:**

1. Establishment of budgets for each function and division of the organization.

2. Regular comparison of the actual performance with the budget to know the variations from budget and placing the responsibility of executives to achieve the desire result as estimated in the budget.

3. Taking necessary remedial action to achieve the desired objectives, if there is a variation of the actual performance from the budgeted performance.

4. Revision of budgets when the circumstances change.

5. Elimination of wastes and increasing the profitability.

***Now let me tell you the Objectives of Budgetary Control***

Budgetary Control assists the management in the allocation of responsibilities and is a useful device to estimate and plan the future course of action. The general objectives of budgetary control are as:

1. **Planning** : Planning is an important managerial function. It helps to decide in advance what to do, how to do it, when to do it and who is to do it. Planning, thus, helps the managers to anticipate eventualities, prepare for contingencies for achieving the ultimate goals. Budget preparation drives the managers to plan ahead. Managers express their operational plans for anticipated business conditions. Without a formal procedure of budgetary control, many operating managers will not find the time to plan ahead. Thus, budgeting is an important sub-units in the attainment of overall organizational objectives.

2. **Communication**. The employees of an organization should know organizational aims, objectives of sub-units (budget centres) and the part that they have to play for their attainment. Budgets effectively communicate this information to employees.

3. **Coordination**. To coordinate is to harmonize all the activities of a company so as to facilitate its working and its success. Coordination will lead to following results:

a. each department will work in harmony with others,

b. each department will know the specific role that it has to play in the accomplishment of overall organisational objectives, and.

c. the sequential arrangement of activities of different departments is so governed that overlapping of activities and wastage of time and labour is avoided.

A comprehensive system of budgeting helps to coordinate different functional budgets. In other words, a budget will preclude the production department from producing more than the sales department can sell.

4. **Motivation**. If employee have actively participated in budget preparation and if they are convinced that their personal interests are closely associated with the success of organizational plan, budget provide motivation in the form of goals to be achieved. The budgets will motivate the workers, depends purely on how the workers have been mentally and physically involved with the process of budgeting.

5. **Control**: Under the system of budgetary control, budget forecast is thoroughly discussed and reviewed to be finally approved as functional budgets. Thereafter a lot of

cuts and adjustments are made to make functional budgets fit in the organizational objectives. Then budget formation is followed by a feedback system to pinpoint the extent of variation between actual level of performance and budgeted level of performance. Thus, the inbuilt mechanism of the routine of budgetary control is bound to precipitate to an operational control

*The various Advantages of Budgetary Control can be summarized as under;*

1. A budget programme forces the managers to plan ahead.

2. It forces early consideration of basic policies.

3. All members of top management participate in budget committee. For this reason even planning at departmental level gets benefit of experience of seasoned executives.

4. All functional heads are compelled to make plans in harmony with the plans of other departments.

5. Management is forced to put down in cold figures, what it means by satisfactory results.

6. It demands the most economical use of labour, materials, facilities and capital.

7. It inculcates a habit of timely, careful, adequate consideration of all factors before reaching important decisions.

8. The use of budgets removes clouds of uncertainties for lower levels of management regarding basic policies and objectives.

9. The use of budgets promotes understanding of the problems of co-workers

10.It facilitates periodic self-analysis of the organization.

11.It aids in obtaining bank credit.

12.Management is forced to give timely and adequate attention to the effect of changing business conditions.

**Let's see some limitations of Budgetary Control**

The major limitations of budgetary control system are :

1. Estimates are used as basis for budget plan and estimates are based, mostly on available facts and best managerial judgment. Since a lot of human element is involved in exercising managerial judgment, it is but natural to give some allowance in interpretation and utilization of estimated results. Budgeting based on inaccurate forecasts is useless as a yardstick for measuring the actual performance.

2. The circumstances are constantly changing and, therefore, budgets and budgetary techniques will not be useful, till they are continually adapted.

3. In order that a system may be successful, adequate budget education should be imparted at least through the formative period. Sufficient training programmes should be arranged to make employees give positive response to budgetary activities.

4. Execution of budgetary control will not automatically occur. A continuous budget consciousness throughout the organization is needed for achievement of this objective.

5. Budgetary control cannot reduce the manageria1 function to a formula. It is only a managerial tool which measures effectiveness of managerial control.

6. The use of budget may lead to restricted use of resources. Budgets are often taken as limits. Effort may, therefore, not be made to exceed the performance beyond the budgeted targets, even though it may be physically possible.

7. Frequent changes may be called for in budgets due to fast changing industrial climate. It may be difficult for a company to keep pace with these fast changes, because revision of budget is an expensive exercise.

*Let's see what the prerequisites for effective budgetary control*

i. Budgeting process should be backed and supported by the chief executive of an organization.

ii. The organizational goal should be quantified and clearly stated. These goals should be within the framework of organizations' strategic and long-range plans.

iii. The organizational goals must be divided in functional goals.

iv. The functional goals should not conflict with overall organizational objectives.

v. All in the organization should mentally accept the exercise of budget preparation.

vi. The persons responsible for execution of budget should participate in budget preparation.'

vii. The budget should be realistic. It should represent goals that are reasonably attainable.

viii. The budget, should cover all phases of the organization

ix. The budgeting should be a continuous exercise.

x. Periodic reports should be prepared promptly comparing budget and actual results.

xi. Clear-cut organizational lines should be established with appropriate delegation of responsibilities for effective implementation.

For effective budgetary control, the firms need to:

1. Develop the statement of objectives and policies to guide management in reaching its business goals;
2. Build up a sound plan for the organization with clearly defined responsibilities and authorities for each management and supervisory position;
3. Establish a clear understanding of cost behaviour and product cost structure;
4. Develop a plan of operations over a given period of time to achieve objectives efficiently and effectively;
5. Provide for measurement of performance through timely comparative control reports;
6. Take necessary action in the execution of plans to set right unsatisfactory performance;
7. Revise the budgets when required.

**Let's discuss about steps involved in installation of Budgetary Control System**

There are certain steps necessary to install a good budgetary control system in an organization. They are as follows:

1. Determination of the Objectives
2. Organization for Budgeting
3. Budget Centre
4. Budget Officer
5. Budget Manual
6. Budget Committee
7. Budget Period
8. Determination of Key Factor

Lets explain each steps in detail;

**1. Determination of Objectives :** It is very clear that the installation of a budgetary control system presupposes the determination of objectives sought to be achieved by the organization in clear terms.

**2. Organization for Budgeting:** Having determined the objectives clearly, proper organization is essential for the successful preparation, maintenance and administration of budgets. The responsibility of each executive must be clearly defined. There should be no uncertainty regarding the jurisdiction of executives.

**3. Budget Centre:** It is that part of the organization for which the budget is prepared. It may be a department or any other part of the department. It is essential for the appraisal of performance of different departments so as to make them responsible for their budgets.

**4. Budget Officer :** A Budget Officer is a convener of the budget committee. He coordinates the budgets of various departments. The managers of different departments are made responsible for their department's performance.

**5. Budget Manual :**It is a document which defines the objectives of budgetary control system. It spells out the duties and responsibilities of budget officers regarding the preparation and execution of budgets. It also specifies the relations among various functionaries.

**6. Budget Committee :**The heads of all important departments are made members of this committee. It is responsible for preparation and execution of budgets. The members of this committee may sometimes take collective decisions, if necessary. In small concerns, the accountant is made responsible for the same work.

**7. Budget Period :**It is the period for which a budget is prepared. It depends upon a number of factors. It may be different for different concerns/functions.

The following are the factors that may be taken into consideration while determining budget period:

a. The type of budget,

b. The nature of demand for the products,

c. The availability of finance,

d. The economic situation of the cycle and

e. The length of trade cycle

**8. Determination of Key Factor :** Generally, the budgets are prepared for all functional areas of the business. They are inter related and inter dependent. Therefore, a proper coordination is necessary. There may be many factors that influence the preparation of a budget.

For example, plant capacity, demand position, availability of raw materials, etc. Some factors may have an impact on other budgets also. A factor which influences all other budgets is known as Key factor.

The key factor may not remain the same. Therefore, the organization must pay due attention on the key factor in the preparation and execution of budgets.

The difference between, budgets, budgeting and budgetary control has been stated as , 'Budgets are the individual objectives of a department etc., where as budgeting may be said to be the act of building budgets. Budgetary control embraces all and in addition includes the science of planning the budgets themselves and the utilization of such budgets to effect an overall management tool for the business planning and control.'

***I hope you are now able to understand the concept of Budget, Budgeting and Budgetary Control***

***Thanks for your kind attention!***

# Topic – 9 (b): Break Even Analysis

## *Script*

The cost of a product consists of two items: fixed cost and variable cost. Fixed costs are those which remain the same in total amount regardless of changes in volume. Variable costs are those which vary in total amount as the volume of production increases or decreases. As a result, at different levels of activity, the cost structure of a firm changes. The effect on profit on account of such variations is studied through break even analysis or cost-volume-profit analysis (CVP). This lesson deals with the various concepts, tools and techniques of break even analysis.

Break-even analysis is a costing technique that helps executives in profit planning and consequently it is essential for them to have an in-depth knowledge about the nature and application of this technique. In a broader sense, break-even analysis refers to the study of relationship between cost, volume and profit at different levels of sales or production which in accounting terminology is known as cost-volume-profit analysis. Cost-volume-profit analysis as a planning tool analyses the inherent relationship between price, cost structure, volume and profit.

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Break-even analysis is the form of CVP analysis. It indicates the level of sales at which revenues equal costs. This equilibrium point is called the breakeven point. It is the level of activity where total revenue equals total cost. Break even analysis helps the management in profit planning. Profits are affected by several internal and external factors which influence sales revenues and costs.

Break-even analysis focuses on the way cost and profit change when volume changes. It is, broadly speaking, that system of analysis which determines the probable profit at any level of activity. This technique is generally used to analyse the incremental effect of volume on costs, revenues and profits. There are some questions that the entrepreneurs are interested to know;

- At what volume of operations are costs and revenues equal?
- What volume of output or sales would be necessary to earn a profit of say Rs.5 lakhs?
- How much profit will be earned at a volume of, say 20,000 units?
- What will happen if there is a reduction of 20 % in the selling price?
- What will happen if there is a increase of 10 % in the selling price?

Questions like these are sought to be answered through Break-even analysis. This detailed analysis will help the management to know the profit levels at different activity levels of production and sales and various types of costs involved in it.

**Let's see the objectives of Break-even analysis analysis which are:**

i) To forecast profits accurately.

ii) To help in preparing flexible budgets.

iii) To help in performance evaluation for purposes of control.

iv) To formulate proper pricing policy.

v) To know the overheads to be charged to production at various levels.

In Break-even analysis the Volume or activity is a crucial factor, which can be expressed in any one of the following ways:

1. Sales capacity expressed as a percentage of maximum sales.
2. Sales value in terms of money.
3. Units sold.
4. Production capacity expressed in percentages.
5. Value of cost of production.
6. Direct labour hours.
7. Direct labour value.
8. Machine hours.

**The factors which are usually involved in this analysis are:**

a. Selling price
b. Sales volume
c. Sales mix
d. Variable cost per unit
e. Total fixed cost

Now let's discuss about the approaches in Break-even Computation

The two major approaches to compute break-even are:

**i. Mathematical approach**

**ii. Graphic approach**

**i. Mathematical approach:** In this break-even can be computed by engaging the technique of unit contribution, which is developed on the basis of marginal cost equation. The equation can be stated as follows:

Sale = Variable cost + Fixed cost + Profit

Since at the break-even point profit is absent, therefore, the same equation for this purpose can be rewritten as follows:

Sales = Variable cost + Fixed cost

or Sales - Variable cost = Fixed cost

or Contribution = Fixed cost

The study of the above equation reveals that sales revenue of each unit leaves a certain amount in the shape of contribution margin to meet fixed costs. Thus, in order to work out the required number of units to break-even (where the amount of contribution will be sufficient to cover total fixed cost),the total fixed cost must be divided by the unit contribution.

**ii. Graphic approach**: in this approach the break-even analysis is demonstrated graphically which is commonly known as breakeven chart. A break-even chart is a graphic approach to the study of the relationship of cost, revenue and profit. The graphic instead of mathematical approach is often used because it tends to be more easily understood by the people whose acquaintance with mathematics is minimal and it provides an immediate view of variable costs, fixed costs, and profit at any level of activity.

Information for constructing a break-even chart can be obtained from the income statement of the concern. However, the total cost i.e., fixed cost, variable cost, and semi-variable cost must be classified only into two categories of costs—Fixed cost and variable cost. A brief description of these costs is as follows:

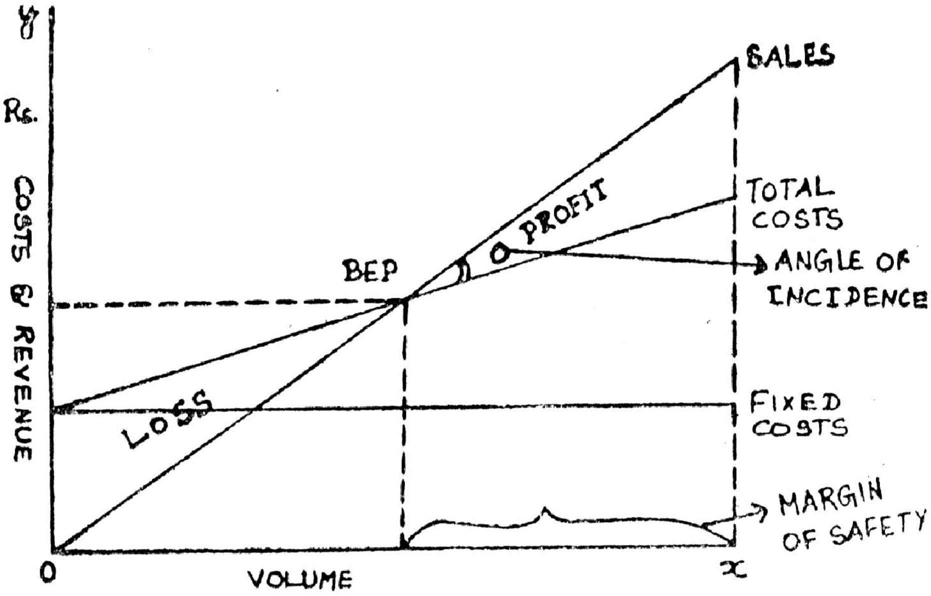
1. Fixed Cost Fixed costs are the costs which remain fixed for all practical purposes to a

certain level of activity. Once that level of activity is increased, the fixed cost will also increase to a specific degree. Examples of such costs are cost of plant and machinery, salaries, rent etc. These costs are shown on the graph by means of a straight line.

2. Variable Cost These costs vary in proportion to output. This means that they increase directly with the volume of production. Cost of material, wages, carriage etc. are some examples of variable cost. For graphic application, these costs will be aggregated with the fixed cost to show amount of total cost.

3. Semi-variable Cost Semi-variable costs possess the characteristics of both fixed and variable costs. These costs demand special attention from the management in splitting them into fixed and variable costs.

**Lets explain the preparation of Break Even Chart**




This is a simple break even chart. The procedure for drawing the chart is as follows:

1) Take X - axis as the volume of sales or capacity or production.
2) Take Y – axis as the costs or revenue.
3) Having known at '0' level of activity the same fixed cost is incurred, the fixed cost line drawn parallel to the X – axis.
4) At '0' level of activity, the total cost is equal to fixed cost. Therefore the total cost line starts from the point where the fixed cost line meets the Y – axis.
5) Next plot the sales line starting from '0 '.
6) The meeting point of the sales and the total cost line is the Break Even Point. It is also called Break Even Point because at this point there is no profit and loss either.

The costs are just recovery by sales. If a perpendicular line is drawn to the X- axis from the BEP, the meeting point of the perpendicular and X- axis will show the break even volume in units. If a perpendicular line is drawn to meet the Y- axis from the BEP, the meeting point shows the break even volume in money terms.

Other details shown in the break even charts are:
**Angle of Incidence:** This is the angle of intersection between the sales line and the total cost line. The larger the angle the greater is the profit or loss, as the case may be.

**Margin of Safety:** This is the difference between the actual sales level and the break even sales. It represents the "cushion" for the company. The larger the distance between the break even sales volume and the actual sales volume, more comfortably the company can afford to allow the fall in sales without the danger of incurring losses. If the margin of safety is low i.e., if the distance between the actual sales line and the break even sales line is too short, even a small fall in the sales volume will drive the company into the loss area.

The position of breakeven point should be ideally closer to the y – axis. This will mean that even a small increase in sales will immediately make the company break even. I t should be noted that beyond the breakeven point all contribution (Sales – Marginal Cost) will directly add the profits.

Break-even analysis provides the following important information for managerial decision making:

i. Cost of production at various levels of operation;

ii. Volume or level of production/activity required to attain a particular objective;

iii. Profits expected/earned; and

iv. Variation between cost of production and sales revenue.

**MANAGERIAL APPLICATION OF BREAK-EVEN CHART**

Break-even chart serves management as an effective tool in profit planning and other related decisions. The following areas of decision making are usually exposed to the application of break-even chart.

**Budgeting:** The effect of budgeted sales on profit can be easily estimated with the use of break-even chart. Such an analysis can be made for the entire business or for a part of it.

**The Make-or-Buy Decision:** Management is usually confronted with the problem decision of make- or-buy an item. This problem is solved to a large extent by the break-even chart.

**The Pricing Decision:** Break-even chart also helps management in pricing decision as it enables it to explore the effect of price alternatives on product profitability.

**Sales Mix Analysis:** The study of cost-volume-profit can be made easily with the help of break-even chart. Such a study can cover the entire product mix of a company instead of being limited to a single product. Each product would require a separate chart. The aggregate study of all charts can give a clear profitability picture of the given sales mix. The process shall be repeated for each mix and then the comparison of various mixes can easily indicate the profitable sales mix

**ASSUMPTION UNDERLYING BREAK-EVEN ANALYSIS**

Break even analysis is based on several assumptions. Effective use of this analysis calls for an understanding of the significance of these assumptions which are discussed below:

**i. The behaviour of costs is predictable**. The conventional cost-volume-profit model is based on the assumption that the cost of the firm is divisible into two components; fixed costs vary variable costs. Fixed costs remain unchanged for all ranges of output; variable costs vary proportionately to volume. Hence the behaviour of costs is predictable. In reality, however, it is not necessary for these assumptions to be valid over the entire range of volume. If they are valid over the range of output within which the firm is most likely to operate – referred to as the relevant range – cost volume profit analysis is a useful tool.

**ii. The unit selling price is constant**. This implies that the total revenue of the firm is a linear function of output. For firms which have a strong market for their products, this assumption is quite valid. For other firms, however, it may not be so. Price reduction might be necessary to achieve a higher level of sales. On the whole, however, this is a reasonable assumption and not unrealistic enough to impair the validity of the cost-volume- profit model, particularly in the relevant range of output.

**iii. The firm manufactures a stable product** – mix. In the case of a multi-product firm, the cost volume profit model assumes that the product – mix of the firm remains stable. Without this premise it is not possible to define the average variable profit ratio when different products have different variable profit ratios. While it is necessary to make this assumption, it must be borne in mind that the actual mix of products may differ from the planned one. Where this discrepancy is likely to be significant, cost-volume-profit model has limited applicability.

**iv. Inventory changes are nil.** A final assumption underlying the conventional cost-volume-profit model is that the volume of sales is equal to the volume of production during an accounting period. Put differently, inventory changes are assumed to be nil. This is required because in cost-volume-profit analysis we match total costs and total revenues for a particular period.

**Now let's see the uses and limitations of Break Even Analysis**
**Uses of BE analysis are as follows:**

1. It is a simple and easy to understand.
2. It is of utmost use in profit planning.
3. It provides the basic information for further profit improvement studies.
4. It is useful in decision making and it helps in considering the risk implications of alternative actions.
5. It helps in finding out the effect of changes in the price, volume, or cost.
6. It helps in make or buys decisions also and helpful in the critical circumstances to find out the minimum profitability the firm can maintain.

**The Limitations of BE Analysis is**

1. The basis assumptions are at times base less. For example, we can say that the fixed costs cannot remain unchanged all the time. And the constant selling price and unit variable cost concept are also not acceptable.

2. It is difficult to segregate the cost components as fixed and variable costs.
3. It is difficult to apply for companies having large number of products/ services.
4. It is a short-run concept and has a limited use in long range planning.
5. It is a static tool since it gives the relationship between cost, volume and profit at a given point of time and
6. It fails to predict future revenues and costs.

***Now let's discuss some of the Formulae/ equations used in Break even analysis***

**Marginal Cost** : Marginal Cost (MC) is the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. Thus marginal cost is the added cost of an extra unit of output.

Marginal Cost (MC) =Direct Material + Direct Labour + Other Variable Costs
= Total Cost – Fixed Cost

**Marginal cost equation**
The algebraic expression of contribution is known as marginal cost equation. It can be expressed thus:

S – V = F + P
S – V = C
C = F + P And In Case Of Loss
C = F – L

Where: S = Sales

V = Variable Cost

C = Contribution

F = Fixed Cost

P = Profit

L = Loss

**Contribution**
The difference between selling price and variable cost (or marginal cost) is known as `contribution' or `gross margin'. It may be considered as some sort of fund from out of which all fixed costs are met. The difference between contribution and fixed cost represents either profit or loss, as the case may be.
Contribution is calculated as:

Contribution = Selling Price – Variable Cost
= Fixed Cost + Profit Or – Loss

It is clear from the above equation that profit arises only when contribution exceeds fixed costs. In other terms, the point of 'no profit no loss' will be at a level where contribution is equal to fixed costs.

**Profit Volume Ratio (P/V Ratio)**
The profitability of business operations can be found out by calculating the P/V ratio. It shows the relationship between contribution and sales and is usually expressed in

percentage. It is also known as `marginal-income ratio', `contribution-sales ratio' or `variable-profit ratio'. P/V ratio thus is the ratio of contribution to sales, and is calculated as:

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

The ratio can also be shown by comparing the change in contribution to change in sales, or change in profit to change in sales. Any increase in contribution, obviously, would mean increase in profit, as fixed expenses are assumed to be constant at all levels of production.

$$\text{P/V Ratio} = \frac{\text{Change in Contribution}}{\text{Change in Sales}}$$

$$= \frac{\text{Change in Profit}}{\text{Change in Sales}}$$

The importance of P/V ratio lies in its use for evaluating the profitability of alternative products, proposals or schemes. A higher ratio shows greater profitability. Management should, therefore, try to increase p/v ratio by widening the gap between the selling price and the variable costs. This can be achieved by increasing sale price, reducing variable costs or switching over to more profitable products.

**Break-Even Point :** It is a point of no profit or no loss. At this point contribution is equal to fixed costs. Break-even point, can be calculated thus:

$$\text{B.E.P. (In Units)} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}}$$

$$= \frac{\text{Fixed Cost}}{\text{Selling Price/Unit} - \text{Marginal Cost/Unit}}$$

$$\text{B.E.P. (Sales)} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}} \times \text{Selling Price/Unit}$$

$$= \frac{\text{Fixed Cost}}{\text{Total Contribution}} \times \text{Total Sales}$$

$$\text{or} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

At break-even point the desired profit is zero. Where the volume of output or sales is to be calculated so as to earn a desired amount of profit, the amount of desired profits has to be added to the fixed cost given in the above formula.

$$\text{Units to Earn A Desired Profit} = \frac{\text{Fixed Cost + Desired Profit}}{\text{Contribution Per Unit}}$$

$$\text{Sales To Earn A Desired Profit} = \frac{\text{Fixed Cost + Desired Profit}}{\text{P/V Ratio}}$$

**Cash Break-Even Point**

It is the level of output or sales where the cash inflow will be equivalent to cash needed to meet immediate cash liabilities. To this end, fixed costs have to be divided into two parts (i) fixed cost which do not need immediate cash outlay (depreciation etc.) And (ii) fixed cost which need immediate cash outlay (rent etc.). Cash break-even point can be calculated thus:

$$\text{Cash Break-Even Point (Of Output)} = \frac{\text{Cash Fixed Costs}}{\text{Cash Contribution Per Unit}}$$

**Composite Break-Even Point**

Where a firm is dealing with several products, a composite breakeven point can be calculated using the following formula:

$$\text{Composite Break-Even Point (Sales)} = \frac{\text{Cash Fixed Costs}}{\text{Composite P/V Ratio}}$$

$$\text{or} = \frac{\text{Total Fixed Costs X Total Sales}}{\text{Total Contribution}}$$

$$\text{or} = \frac{\text{Total Contribution}}{\text{Total Sales}} \text{ X 100}$$

**Margin of Safety**

Total sales minus the sales at break-even point is known as the margin of safety. Lower break-even point means a higher margin of safety. Margin of safety can also be expressed as a percentage of total sales. The formula is:

Margin Of Safety = Total Sales – Sales At B.E.P.

$$\text{or} = \frac{\text{Profit}}{\text{P/V Ratio}}$$

$$\text{Margin Of Safety (in \%)} = \frac{\text{Margin Of Safety}}{\text{Total Sales}} \text{ X 100}$$

Higher margin of safety shows that the business is sound and when sales substantially come down, (but not below break even sales) profit might be earned by the business. Lower margin of safety, as pointed out earlier, means that when sales come down slightly profit position might be affected adversely. Thus, margin of safety can be used to test the soundness of a business. In order to improve the margin of safety a business can increase selling prices (without affecting demand, of course) reducing fixed or variable costs and replacing unprofitable products with profitable one.

***Let's see some illustrative numerical problems to understand the various elements of Break even analysis***

***Illustration*** 1: A firm has supplied you the following information in respect of one of its products:

| | |
|---|---|
| Total Fixed Costs | 18,000 |
| Total Variable Costs | 30,000 |
| Total Sales | 60,000 |
| Units Sold | 20,000 |

Find out (a) contribution per unit, (b) break-even point, (c) margin of safety, (d) profit, and (e) volume of sales to earn a profit of rs.24,000.

**Solution:**

$$\text{Selling Price Per Unit} = \frac{60{,}000}{20{,}000} = \text{Rs.}3$$

$$\text{Variable Cost Per Unit} = \frac{30{,}000}{20{,}000} = \text{Rs.}1.50$$

(A) Contribution Per Unit = Selling Price Per Unit – Variable Cost Per Unit

= Rs.3 – Rs.1.50

= Rs.1.50

$$\text{(B) Break-Even Point} = \frac{\text{Total Fixed Cost}}{\text{Contribution Per Unit}}$$

$$= \frac{\text{Rs.}18{,}000}{\text{Rs.}1.50}$$

= 12,000 Units

(C) Margin Of Safety = Units Sold – Break-Even Point

= 20,000 – 12,000

= 8,000 Units (Or) Rs.24,000

(D) Profit = (Units Sold X Contribution Per Unit) - Fixed Cost
= (20,000 X Rs.1.50) - Rs.18,000
= Rs.12,000

(E) Volume Of Sales To Earn A Profit Of Rs.24,000

$$= \frac{\text{Fixed Cost + Desired Profit}}{\text{Contribution Per Unit}}$$

$$= \frac{18{,}000 + 24{,}000}{1.50} = 28{,}000 \text{ units}$$

**Illustration 2**: From the following particulars, find out the selling price per unit if B.E.P. is to be brought down to 9,000 units.

Variable Cost Per Unit Rs.75
Fixed Expenses Rs.2,70,000
Selling Price Per Unit Rs.100

**Solution**:

Let us assume that the contribution per unit at B.E.P. Sales of 9,000 is X.

$$\text{B.E.P.} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}}$$

Contribution per unit is not known. Therefore,

$$9{,}000 \text{ Units} = \frac{2{,}70{,}000}{X}$$

9,000 X = 2,70,000
X = 30

Contribution Is Rs.30 Per Unit, In Place Of Rs.25. So, The Selling Price Should Be Rs.105, i.e. Rs.75 + Rs.30.

**Cost-volume-profit relationship:** The relationship between cost volume and profit are well defined in CVP analysis. With the given example we can elaborately see the relationship

ABC Ltd. is a single product manufacturer whose selling price is 20 per unit and the variable cost is 12 per unit. The annual fixed cost is 160000. The number of units produced and sold is 20000. Now if we analyse the CVP relationship

The contribution per unit is = Selling price -variable cost = 20 - 12 = 8/-

The total contribution for 20000 units is = 8 x 20000 = 160000
Since the profit = total contribution - fixed cost, we get nil profit. 160000-160000=0
This is the break even point where the total cost is equal to the total revenue and the company has no profit and no loss.

Let us see a few alternatives
If the fixed cost is 120000, then the company may earn a profit of (160000-120000) = 40000.
If the fixed cost is 200000, then it may end in a loss of Rs (200000-160000) = 40000
If the variable cost per unit is increased, say to 15 in the existing condition, then the contribution will come to Rs (20000 x (20-15) = 100000 and that will result in a loss of 160000-100000 =40000. If the variable cost per unit is decreased say to 10 then the contribution will come to ` 20000x (20-10) = 200000. Then the profit will be 200000-160000=40000

The above proves that the variation in the costs changes the profitability of the firm.
If the cost decreases, profit increases and vice versa.
Now we can see how the change in volume alters the profitability. If the sales volume is 10000 instead of 20000 as above and the all the other conditions being the same, the result will be (10000x8) - 160000 = 80000 loss. Likewise if the volume is increased to 30000 it will result in a profit of 30000x8 - 160000 = 80000.

This shows that the profit increases with the increase in volume when other conditions are unchanged.

***Hope you are now able to understand the concept of Break even analysis and its applications for an entrepreneur***

**E – CONTENT**

**Topic – 9 (b): Break Even Analysis**

## SUMMARY

Break-even analysis is a technique that helps executives in profit planning. It refers to the study of relationship between cost, volume and profit at different levels of sales or production which is also known as cost-volume-profit (CVP) analysis. The cost of a product consists of two items: fixed cost and variable cost. Fixed costs are those which remain the same in total amount regardless of changes in volume. Variable costs are those which vary in total amount as the volume of production increases or decreases. As a result, at different levels of activity, the cost structure of a firm changes. The effect on profit on account of such variations is studied through break even analysis or cost-volume-profit analysis (CVP). This lesson deals with the various concepts, tools and techniques of break even analysis.

Break-even analysis focuses on the way cost and profit change when volume changes. It is, broadly speaking, that system of analysis which determines the probable profit at any level of activity. This technique is generally used to analyse the incremental effect of volume on costs, revenues and profits. In short Break-even analysis helps an entrepreneur; i) to forecast profits accurately ii) help in preparing flexible budgets iii) help in performance evaluation for purposes of control iv) enable to formulate proper pricing policy and v) analyze the overheads to be charged to production at various levels.

## OBJECTIVES

This module will help the students to:

- Define and understand the concepts of Fixed cost and variable cost
- Understand the concept of Break even analysis
- Comprehend the Procedure and approaches in Break-even Computation
- Understand the applications of Break even analysis in business decision making
- Understand and apply the various formulae/ equations used in Break even analysis

## Frequently Asked Questions

1. **Define Beak even analysis and discuss its objectives**

   Break-even analysis indicates the level of sales at which revenues equal costs. This equilibrium point is called the breakeven point. It is the level of activity where total revenue equals total cost. Break even analysis helps the management in profit planning. Break-even analysis focuses on the way cost and profit change when volume changes. This technique is generally used to analyse the incremental effect of volume on costs, revenues and profits.

   The objectives of Break-even analysis are:

   a. To forecast profits accurately.
   b. To help in preparing flexible budgets.
   c. To help in performance evaluation for purposes of control.
   d. To formulate proper pricing policy.
   e. To know the overheads to be charged to production at various levels.

2. **Discuss the Mathematical approach and Graphic approach to compute break-even**

   **Mathematical approach:** In this break-even can be computed by engaging the technique of unit contribution, which is developed on the basis of marginal cost equation. The equation can be stated as follows:

   Sale = Variable cost + Fixed cost + Profit

   Since at the break-even point profit is absent, therefore, the same equation for this purpose can be rewritten as follows:

   Sales = Variable cost + Fixed cost

   or Sales - Variable cost = Fixed cost

   or Contribution = Fixed cost

   The study of the above equation reveals that sales revenue of each unit leaves a certain amount in the shape of contribution margin to meet fixed costs. Thus, in order to work out the required number of units to break-even (where the amount of contribution will be sufficient to cover total fixed cost),the total fixed cost must be divided by the unit contribution.

   **Graphic approach**: in this approach the break-even analysis is demonstrated graphically which is commonly known as breakeven chart. Which show the relationship of cost, revenue and profit. The graphic instead of mathematical approach is often used because it tends to be more easily understood by the people whose acquaintance with mathematics is minimal and it provides an immediate view of variable costs, fixed costs, and profit at any level of activity.

   Information for constructing a break-even chart can be obtained from the income statement of the concern. However, the total cost i.e., fixed cost, variable cost, and semi-variable cost must be classified only into two categories of costs—Fixed cost and variable cost. A brief description of these costs is as follows:

**3. Discuss the managerial application of break-even chart**

Break-even chart serves management as an effective tool in profit planning and other related decisions as given below;

a. **Budgeting:** The effect of budgeted sales on profit can be easily estimated with the use of break-even chart. Such an analysis can be made for the entire business or for a part of it.
b. **The Make-or-Buy Decision:** Management is usually confronted with the problem decision of make- or-buy an item. This problem is solved to a large extent by the break-even chart.
c. **The Pricing Decision:** Break-even chart also helps management in pricing decision as it enables it to explore the effect of price alternatives on product profitability.
d. **Sales Mix Analysis:** The study of cost-volume-profit can be made easily with the help of break-even chart. Such a study can cover the entire product mix of a company instead of being limited to a single product. Each product would require a separate chart. The aggregate study of all charts can give a clear profitability picture of the given sales mix.

**4. Explain the assumption underlying break-even analysis**

Break even analysis is based on several assumptions, which are discussed below:

**i. The behaviour of costs is predictable**. The conventional cost-volume-profit model is based on the assumption that the cost of the firm is divisible into two components; fixed costs and variable costs. Fixed costs remain unchanged for all ranges of output; variable costs vary proportionately to volume.

**ii. The unit selling price is constant**. This implies that the total revenue of the firm is a linear function of output. For firms which have a strong market for their products, this assumption is quite valid. For other firms, however, it may not be so. Price reduction might be necessary to achieve a higher level of sales.

**iii. The firm manufactures a stable product – mix**. In the case of a multi-product firm, the cost volume profit model assumes that the product – mix of the firm remains stable. Without this premise it is not possible to define the average variable profit ratio when different products have different variable profit ratios. While it is necessary to make this assumption, it must be borne in mind that the actual mix of products may differ from the planned one..

**iv. Inventory changes are nil.** A final assumption underlying the conventional cost-volume-profit model is that the volume of sales is equal to the volume of production during an accounting period. Put differently, inventory changes are assumed to be nil. This is required because in cost-volume-profit analysis we match total costs and total revenues for a particular period.

5. **Discuss the advantages/ uses of Break Even Analysis**

**Advantages/ uses of Break Even Analysis are as follows:**

a. It is a simple and easy to understand.
b. It is of utmost use in profit planning.
c. It provides the basic information for further profit improvement studies.
d. It is useful in decision making and it helps in considering the risk implications of alternative actions.
e. It helps in finding out the effect of changes in the price, volume, or cost.
f. It helps in make or buys decisions also and helpful in the critical circumstances to find out the minimum profitability the firm can maintain.

6. **What are the Limitations of Break Even Analysis?**

**The Limitations of BE Analysis are as under**

a. The basic assumptions are at times baseless. For example, we can say that the fixed costs cannot remain unchanged all the time and the constant selling price and unit variable cost concept are also not acceptable.
b. It is difficult to segregate the cost components as fixed and variable costs.
c. It is difficult to apply for companies having large number of products/ services.
d. It is a short-run concept and has a limited use in long range planning.
e. It is a static tool since it gives the relationship between cost, volume and profit at a given point of time and
f. It fails to predict future revenues and costs.

**7. Define marginal cost and explain the marginal cost equation**

Marginal Cost is the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. Thus marginal cost is the added cost of an extra unit of output.

Marginal Cost (MC) =Direct Material + Direct Labour + Other Variable Costs
= Total Cost – Fixed Cost

**Marginal cost equation:** The algebraic expression of contribution is known as marginal cost equation. It can be expressed thus:

$S – V = F + P$

$S – V = C$

$C = F + P$ And In Case Of Loss $C = F – L$

Where: S =Sales V =Variable Cost C =Contribution F =Fixed Cost P =Profit L = Loss

8. **What do you mean by Margin of safety**

Margin of Safety is the difference between the actual sales level and the break even sales. It represents the "cushion" for the company. The larger the distance between the break even sales volume and the actual sales volume, more comfortably the company can afford to allow the fall in sales without the danger of incurring losses. If the margin of safety is low i.e., if the distance between the actual sales line and the break even sales line is too short, even a small fall in the sales volume will drive the company into the loss area.

9. **Discuss the computation of Break-Even Point**

**Break-Even Point** is a point of no profit or no loss. At this point contribution is equal to fixed costs. Break-even point, can be calculated as given below:

$$\text{B.E.P. (In Units)} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}}$$

$$= \frac{\text{Fixed Cost}}{\text{Selling Price/Unit} - \text{Marginal Cost/Unit}}$$

$$\text{B.E.P. (Sales)} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}} \text{ X Selling Price/Unit}$$

$$= \frac{\text{Fixed Cost}}{\text{Total Contribution}} \text{ X Total Sales}$$

$$\text{or} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

**QUIZ**

**Indicate whether the following statements are true or false:**

1. Break-even analysis is a costing technique that helps executives in cash management.
   a) True
   **b) False**

2. At break-even point total sales revenue is exactly equal total costs of the output produced or sold.
   **a) True**
   b) False

3. Cost-volume-profit analysis examines the relationship between volume, profit and cost structure of a company.
   **a) True**
   b) False

4. In a break-even chart the larger angle of incidence reveals that profits for the company will be low.
   a) True
   **b) False**

5. Variable costs per unit have tendency to remain constant.
   **a) True**
   b) False

6. Semi-variable costs posses the characteristics of both fixed and variable costs.
   **a) True**
   b) False

**Choose the correct answer from the following:**

1. At break-even point sales revenue is
**a) equal to total costs**
b) less than total costs
c) more than total costs
d) none of the above

2. The graphic representation of break-even analysis is known as
a) profit volume chart
**b) break- even chart**
Management Accounting: Principles and Practice, 3rd Edition
c) Gantt chart
d) none of the above

3. With a change in volume of output , variable costs per unit are bound to
a) vary in proportion to output
**b) remain constant**

c) vary disproportionately
d) increase incrementally

4. Semi-variable costs posses the characteristics of
a) fixed costs
b) variable costs
**c) both (a) and (b) above**
d) none of the above

5. In break-even chart, the angle which is formed by the intersection of sales line and total cost line that is known as
a) margin of safety
**b) angle of incidence**
c) break-even point
d) none of the above

## GLOSSARY

**Break-even analysis**: It is the form of Cost Volume Profit analysis. It indicates the level of sales at which revenues equal costs. This equilibrium point is called the breakeven point. It is the level of activity where total revenue equals total cost. Break even analysis helps the management in profit planning. Profits are affected by several internal and external factors which influence sales revenues and costs.

**Fixed Cost** :Fixed costs are the costs which remain fixed for all practical purposes to a certain level of activity. Once that level of activity is increased, the fixed cost will also increase to a specific degree. Examples of such costs are cost of plant and machinery, salaries, rent etc.

**Variable Cost** :These costs vary in proportion to output. This means that they increase directly with the volume of production. Cost of material, wages, carriage etc. are some examples of variable cost.

**Semi-variable Cost** : Semi-variable costs possess the characteristics of both fixed and variable costs. These costs demand special attention from the management in splitting them into fixed and variable costs.

**Angle of Incidence:** This is the angle of intersection between the sales line and the total cost line. The larger the angle the greater is the profit or loss, as the case may be.

**Margin of Safety:** This is the difference between the actual sales level and the break even sales. It represents the “cushion” for the company. The larger the distance between the break even sales volume and the actual sales volume, more comfortably the company can afford to allow the fall in sales without the danger of incurring losses. If the margin of safety is low i.e., if the distance between the actual sales line and the break even sales line is too short, even a small fall in the sales volume will drive the company into the loss area.

**Marginal Cost** : Marginal Cost (MC) is the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. Thus marginal cost is the added cost of an extra unit of output.

**Contribution :** The difference between selling price and variable cost (or marginal cost) is known as `contribution' or `gross margin'. It may be considered as some sort of fund from out of which all fixed costs are met. The difference between contribution and fixed cost represents either profit or loss, as the case may be.

Contribution is calculated as:

Contribution = Selling Price – Variable Cost
= Fixed Cost + Profit Or – Loss

**Profit Volume Ratio (P/V Ratio) :** The profitability of business operations can be found out by calculating the P/V ratio. It shows the relationship between contribution and sales and is usually expressed in percentage. It is also known as `marginal-income ratio', `contribution-sales ratio' or `variable-profit ratio'. P/V ratio thus is the ratio of contribution to sales, and is calculated as:

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

**Break-Even Point :** It is a point of no profit or no loss. At this point contribution is equal to fixed costs. Break-even point, can be calculated thus:

$$\text{B.E.P. (In Units)} = \frac{\text{Fixed Cost}}{\text{Contribution Per Unit}}$$

**Marginal cost equation**

The algebraic expression of contribution is known as marginal cost equation. It can be expressed as:

$S – V = F + P$

$S – V = C$

$C = F + P$ And In Case Of Loss $C = F – L$

Where: S = Sales V = Variable Cost C = Contribution F = Fixed Cost P = Profit L = Loss

**ASSIGNMENT**

1) Explain Break even analysis and discuss its objectives
2) Discuss various assumptions of Break even analysis
3) Explain the Graphic approach of Break even computation with the help of an example
4) Discuss the managerial application of break-even analysis
5) Describe the limitations of break-even analysis

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**https://swayam.gov.in/courses/Overview/?cInfo=MP7Z4Xew3692cgBiQK5HgleX7nub4zk1JZBLGqp6UF0zMRXwZNqCweIrQaQy9FflRXTrlliv9n6xVDqva%2bV0mQh8UdBZ4yCSHGrWc5dT9z%2bhzePOahhwaw%3d%3d**

**Script**

# Goods and ServicesTax (GST)

**Hello everyone! Today's lecture is about Goods and Services Tax (GST)**

In this lecture we will discuss about Good and Services Tax(GST) - its concept, objectives, features, importance, and impact of GST on Indian economy. GST is one indirect tax for the whole nation, which will make India one unified common market. It is a single tax on the supply of goods and services, right from the manufacturer to the consumer. Credits of input taxes paid at each stage will be available in the subsequent stage of value addition, which makes GST essentially a tax only on value addition at each stage. The final consumer will thus bear only the GST charged by the last dealer in the supply chain, with set-off benefits at all the previous stages. Thus all of them are benefited including a) Business and Industry b) Central and State Governments and the c) Consumer

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GST for Business and Industry make **Easy compliance, Uniformity of tax rates and structures, Removal of cascading, improved competitiveness;** which reduces the transaction cost of doing business in an easy and effective manner. It is IT enabled service which makes all tax payer services easy, such as registrations, returns, payments, etc. would be available to the taxpayers online, which make compliance easy and transparent. It helps in cross states that would ensure that there is minimal cascading of taxes. This would reduce hidden costs of doing business and also increase gain to manufacturer and exporters subsuming of major Central and State taxes in GST, complete and comprehensive set-off of input goods and services and phasing out of Central Sales Tax (CST) would reduce the cost of locally manufactured goods and services.The uniformity in tax rates and procedures across the country will also go a long way in reducing the compliance cost. GST has been implemented from July 01, 2017 in India.

**Concept of GST**

Goods and Services Tax (GST) is a comprehensive tax levied on manufacture, sale and consumption of goods and services at a national level, under which no distinction is made between goods and services for levying of tax. It will mostly substitute all indirect taxes levied on goods and services by the Central and State governments in India.

GST is a tax on goods and services under which every person is liable to pay tax on his output and is entitled to get input tax credit (ITC) on the tax paid on its inputs, therefore, a tax on value addition only and ultimately the final consumer shall bear the tax.

GST is expected to be a destination-based tax that should replace the current central taxes and duties such as Excise Duty, Service Tax, Counter Veiling Duty (CVD), Special Additional Duty of Customs (SAD), central charges and cesses and local state taxes, i.e., Value Added Tax (VAT), Central Sales Tax (CST), Octroi, Entry Tax, Purchase Tax, Luxury Tax, state cesses and surcharges and Entertainment tax (other than the tax levied by the local bodies).

A well-designed GST in India is expected to simplify and rationalize the current indirect tax regime, eliminate tax cascading and put the Indian economy on high-growth trajectory. The proposed GST levy may potentially impact both manufacturing and services sector for the entire value chain of operations, namely procurement, manufacturing, distribution, warehousing, sales, and pricing.

**Journey of GST in India**

GST is being introduced in the country after a 13 year long journey since it was first discussed in the report of the Kelkar Task Force on indirect taxes. A brief chronology outlining the major milestones on the proposal for introduction of GST in India is as follows:

1. In 2003, the Kelkar Task Force on indirect tax had suggested a comprehensive Goods and Services Tax (GST) based on VAT principle.

2. A proposal to introduce a National level Goods and Services Tax (GST) by April 1, 2010, was first mooted in the Budget Speech for the financial year 2006-07.

3. Since the proposal involved reform / restructuring of not only indirect taxes levied by the Centre but also the States, the responsibility of preparing a Design and Road Map for the implementation of GST was assigned to the Empowered Committee of State Finance Ministers (EC).

4. Based on inputs from Govt of India and States, the EC released its First Discussion Paper on Goods and Services Tax in India in November, 2009.

5. In order to take the GST related work further, a Joint Working Group consisting of officers from Central as well as State Government was constituted in September, 2009.

6. In order to amend the Constitution to enable introduction of GST, the Constitution (115th Amendment) Bill was introduced in the LokSabha in March 2011. As per the

prescribed procedure, the Bill was referred to the Standing Committee on Finance of the Parliament for examination and report.

7. Meanwhile, in pursuance of the decision taken in a meeting between the Union Finance Minister and the Empowered Committee of State Finance Ministers on 8th November, 2012, a ‘Committee on GST Design’, consisting of the officials of the Government of India, State Governments and the Empowered Committee was constituted.

8. This Committee did a detailed discussion on GST design including the Constitution (115th) Amendment Bill and submitted its report in January, 2013. Based on this report, the EC recommended certain changes in the Constitution Amendment Bill in their meeting at Bhubaneswar in January 2013.

9. The Empowered Committee in the Bhubaneswar meeting also decided to constitute three committees of officers to discuss and report on various aspects of GST as follows:-

   (a) Committee on Place of Supply Rules and Revenue Neutral Rates;

   (b) Committee on dual control, threshold and exemptions;

   (c) Committee on IGST and GST on imports.

10. The Parliamentary Standing Committee submitted its report in August, 2013 to the Lok Sabha. The recommendations of the Empowered Committee and the recommendations of the Parliamentary Standing Committee were examined in the Ministry in consultation with the Legislative Department.

11. The final draft Constitutional Amendment Bill incorporating the above stated changes were sent to the Empowered Committee for consideration in September 2013.

12. The EC once again made certain recommendations on the Bill after its meeting in Shillong in November 2013. Certain recommendations of the Empowered Committee were incorporated in the draft Constitution (115th Amendment) Bill. The revised draft was sent for consideration of the Empowered Committee in March, 2014.

13. The 115th Constitutional (Amendment) Bill, 2011, for the introduction of GST introduced in the LokSabha in March 2011 lapsed with the dissolution of the 15th LokSabha.

14. In June 2014, the draft Constitution Amendment Bill was sent to the Empowered Committee after approval of the new Government.

15. Based on a broad consensus reached with the Empowered Committee on the contours of the Bill, the Cabinet on 17.12.2014 approved the proposal for introduction of a Bill in the Parliament for amending the Constitution of India to facilitate the introduction of Goods and Services Tax (GST) in the country. The Bill was introduced in the LokSabha on 19.12.2014, and was passed by the LokSabha on 06.05.2015. It was then referred to the Select Committee of RajyaSabha, which submitted its report on 22.07.2015.

**Objectives of GST**

One of the main objectives of Goods & Services Tax (GST) would be to eliminate the double taxation i.e. cascading effects of taxes on production and distribution cost of goods and services. The exclusion of cascading effects i.e. tax on tax, till the level of final consumers, will significantly improve the competitiveness of original goods and services in market, which leads to beneficial impact to the GDP growth of the country.

Introduction of GST to replace the existing multiple tax structures of Centre and State taxes is not only desirable but imperative. Integration of various taxes into a GST system would make it possible to give full credit for inputs taxes collected. GST, being a destination-based consumption tax,is based on VAT principle.

**Features of GST**

1. All transactions and processes carried out only through electronic mode – non-intrusive administration

2. Registration is PAN based

3. Registration only if turnover more than Rs. 20 lac

4. There is an option of voluntary registration

5. Deemed registration in three working days

6. Input Tax Credit available on taxes paid on all procurements (except few specified items)

7. Credit available to recipient only if invoice is matched – helps fight huge evasion of taxes

8. Set of auto-populated monthly returns and annual return

9. Composition taxpayers are required to file quarterly returns
10. There is automatic generation of returns
11. GST practitioners for assisting in filing of returns
12. GSTN and GST Suvidha Providers (GSPs) to provide technology based assistance
13. Tax can be deposited by internet banking, NEFT / RTGS, debit / credit card and over the counter
14. Concept of TDS for certain specified categories
15. Concept of TCS for e-commerce companies
16. Refund to be granted within 60 days
17. Provisional release of 90% refund to exporters within 7 days
18. Interest is payable if refund not sanctioned in time
19. Refund to be directly credited to bank accounts
20. Comprehensive transitional provisions for smooth transition of existing tax payers to GST regime
21. There are special procedures for job work
22. There is a system of GST Compliance Rating
23. Anti-profiteering provision

**Importance of Goods and Services Tax**

Currently, the Indian tax structure is divided into two – Direct and Indirect Taxes. Direct Taxes are levied where the liability cannot be passed on to someone else. An example of this is Income Tax, where you earn the income, and you alone are liable to pay the tax on it.

In the case of Indirect Taxes, the liability of the tax can be passed on to someone else. This means that when the shopkeeper must pay VAT on his sale, he can pass on the liability to the customer. So, in effect, the customer pays the price of the item as well as the VAT on it so the shopkeeper can deposit the VAT to the government. This means that the customer must pay not just the price of the product, but he also pays the tax liability, and therefore, he has a higher outlay when he buys an item.

This happens because the shopkeeper has paid a tax when he bought the item from the wholesaler. To recover that amount, as well as to make up for the VAT he must pay to the government, he passes the liability to the customer who has to pay the additional amount. There is currently no other way for the shopkeeper to recover whatever he pays from his own pocket during transactions and therefore, he has no choice but to pass on the liability to the customer.

Goods and Services Tax will address this issue after it is implemented. It has a system of Input Tax Credit which will allow sellers to claim the tax already paid, so that the final liability on the end consumer is decreased.

**Payment Procedures under GST**

The major features of the proposed payments procedures under GST are as follows:

1) Electronic payment process – no generation of paper at any stage

2) Single point interface for challan generation- GSTN

3) Ease of payment – payment can be made through online banking, Credit Card/Debit Card, NEFT/RTGS and through cheque/cash at the bank

4) Common challan form with auto-population features

5) Use of single challan and single payment instrument

6) Common set of authorized banks

7) Common Accounting Codes

**Working of GST**

A nationwide tax reform cannot function without strict guidelines and provisions. The GST Council has devised a fool proof method of implementing this new tax regime by dividing it into three categories. When Goods and Services Tax is implemented, there will be 3 kinds of applicable Goods and Services Taxes:

1) **CGST – Central Government goods and services tax,**where the revenue will be collected by the central government
2) **SGST – State government goods and services tax,**where the revenue will be collected by the state governments for intra-state sales
3) **IGST – Interstate goods and services tax,**where the revenue will be collected by the central government for inter-state sales

In most cases, the tax structure under the new regime will be as follows:

| Transactions | Old regime | New regime | Explanation |
|---|---|---|---|
| Sale within the state | VAT+ Central excise/Service tax | CGST + SGST | Revenue will now be shared between the Centre and the State. |
| Sale to another state | Central Sales + Excise/ Service tax | IGST | There will be only one type of tax (central) now in case of inter-state sale. |

**Benefits of GST in India**

The benefits of GST can be summarized as under:

**For business and industry**

- Easy compliance: A robust and comprehensive IT system would be the foundation of the GST regime in India. Therefore, all tax payer services such as registrations, returns, payments, etc. would be available to the taxpayers online, which would make compliance easy and transparent.

- Uniformity of tax rates and structures: GST will ensure that indirect tax rates and structures are common across the country, thereby increasing certainty and 2 ease of doing business. In other words, GST would make doing business in the country tax neutral, irrespective of the choice of place of doing business.

- Removal of cascading: A system of seamless tax-credits throughout the value-chain, and across boundaries of States, would ensure that there is minimal cascading of taxes. This would reduce hidden costs of doing business.

- Improved competitiveness: Reduction in transaction costs of doing business would eventually lead to an improved competitiveness for the trade and industry.

- Gain to manufacturers and exporters: The subsuming of major Central and State taxes in GST, complete and comprehensive set-off of input goods and services and phasing out of Central Sales Tax (CST) would reduce the cost of locally manufactured goods and services. This will increase the competitiveness of Indian goods and services in the international market and give boost to Indian exports. The uniformity in tax rates and procedures across the country will also go a long way in reducing the compliance cost.

**For Central and State Governments**

- Simple and easy to administer: Multiple indirect taxes at the Central and State levels are being replaced by GST. Backed with a robust end-to-end IT system, GST would be simpler and easier to administer than all other indirect taxes of the Centre and State levied so far.

- Better controls on leakage: GST will result in better tax compliance due to a robust IT infrastructure. Due to the seamless transfer of input tax credit from one stage to another in the chain of value addition, there is an inbuilt mechanism in the design of GST that would incentivize tax compliance by traders.

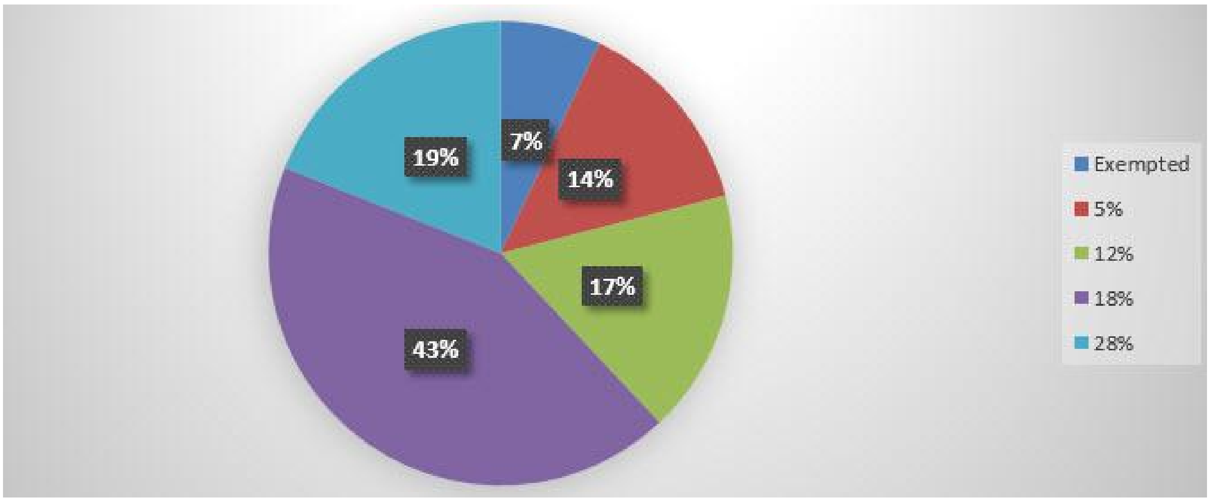
- Higher revenue efficiency: GST is expected to decrease the cost of collection of tax revenues of the 3 Government, and will therefore, lead to higher revenue efficiency.

**For the consumer**

- Single and transparent tax proportionate to the value of goods and services: Due to multiple indirect taxes being levied by the Centre and State, with incomplete or no input tax credits available at progressive stages of value addition, the cost of most goods and services in the country today are laden with many hidden taxes. Under GST, there would be only one tax from the manufacturer to the consumer, leading to transparency of taxes paid to the final consumer.

- Relief in overall tax burden: Because of efficiency gains and prevention of leakages, the overall tax burden on most commodities will come down, which will benefit consumers.

**% of commodities falling under the specific tax rate**




Explanation of above pie diagram is as follows:

**GST rates on Goods**

| COMMODITIES | GST RATE |
|---|---|
| Essential farm produced mass consumption items like milk, cereals, fruits, vegetables, jaggery (gur), food grains, rice and wheat | NIL |
| Common use and mass consumption food items such as spices, tea, coffee, sugar, vegetable / mustard oil, newsprint, coal and Indian sweets | NIL |
| Silk and jute fibre | NIL |
| Gold, Silver and Processed Diamonds | 3% |
| Railway freight | 5% |
| Pharma (Life saving drugs) | 5% |
| Footwear up to Rs. 500 | 5% |
| Cotton and natural fibre | 5% |
| Packaged foods like pickles, tomato sauce, mustard sauce and fruit preserves | 12% |
| Ayurvedic and homeopathy medicines | 12% |
| Processed foods | 12% |
| Readymade garments | 12% |
| Computer printers | 18% |
| Footwear above Rs. 500 | 18% |
| Fruit juices, live animals, meats, butter & cheese | 12% |
| Mobile phones | 12% |
| All FMCG goods like hair oil, soaps, toothpaste and shampoos; chemical and industrial use intermediaries | 18% |
| LPG stoves, military weapons, electronic toys | 18% |
| Pastries, cakes, pasta, ice creams, soups | 18% |
| Man-made fibre and yarn | 18% |
| White and brown goods like TV, refrigerator, AC, washing machines, microwave ovens; soft drinks and aerated beverages | 28% |
| Cement | 28% |
| Perfumes, revolver, pistols | 28% |
| Chocolates, chewing gum, waffles containing chocolate | 28% |
| Luxury and de-merits goods and sin category items e.g. tobacco, pan masala | 28% + cess |
| Small cars – petrol driven | 28% + 1% cess |
| Small cars – diesel driven | 28% + 5% cess |
| Cigarettes | 28% + 5% cess |
| Luxury cars | 28% + 15% cess |
| Heavy bikes, Luxury yachts, private jets | 31% |

**GST rates for Services**

| SERVICES | GST RATE |
|---|---|
| Sleeper, metro tickets and seasonal passes | NIL |
| Outsourcing (in industries such as gems and jewellery, textiles) | 5% |
| Railways (AC) | 5% |
| Restaurants with annual turnover less than Rs. 50 lakhs | 5% |
| Cab aggregators like Ola, Uber | 5% |
| Hotels with tariff Rs. 1,000 – Rs. 2,500 | 12% |
| Non-AC restaurants without liquor license | 12% |
| Real estate (Work contracts) | 12% |
| State run lotteries | 12% |
| Airlines (Business class) | 18% |
| Telecom, financial service | 18% |
| Hotel room tariff Rs. 2,500 – Rs. 7,500<br><br>Hotel room tariff above Rs.7,500 | 18%<br><br>28% |
| AC restaurants with liquor license | 18% |
| Movie tickets below Rs. 100 | 18% |
| Movie tickets above Rs. 100 | 28% |
| 5 star hotels | 28% |
| State authorized lotteries | 28% |

**Types of GST – CGST, SGST, IGST**

Comparison and applicability of 3 types of GST

| | **Central GST – CGST** | **State GST - SGST** | **Integrated GST - IGST** |
|---|---|---|---|
| Tax Levied By | Central Government | State Government | Combined levy, collected by Central Government |
| Taxes that it will replace | Service tax, excise duty, Countervailing Duty (CVD), Special Additional Duty (SAD), Additional Duties of Excise(ADE), and any other indirect central levy | VAT, sales tax, luxury tax, entry tax, entertainment tax, purchase tax, Octroi, taxes on lottery | Central Sales Tax (CST) |
| Applicability | Supplies within a state | Supplies within a state | Interstate supplies and import |
| Input Tax Credit | Against CGST and IGST | Against SGST and IGST | Against CGST,SGST and IGST |
| Tax Revenue Sharing | Central government | State government | Shared between state and central Governments |
| Exemption Limit | Rs. 20 Lakhs annual turnover | Rs. 20 Lakhs annual turnover | Exemption limit not defined |

| | **Central GST – CGST** | **State GST - SGST** | **Integrated GST - IGST** |
|---|---|---|---|
| Composition Scheme | The dealer may use the benefit of turnover of Rs. 50 Lakh | The dealer may use the benefit of turnover of Rs. 50 Lakh | Composition Scheme is not available in this regard |
| Free Supplies | CGST is applicable on free supplies | SGST is applicable on free supplies | IGST is applicable on free supplies |
| Registration | Not applicable till the turnover exceeds Rs. 20 Lakh | Not applicable till the turnover exceeds Rs. 20 Lakh | Registration is necessarily mandatory if supply is made outside the states |

The above table explains the difference between the types of GST, which form the part of GST as a whole.

With the proposed implementation of GST from 1 July 2017 gaining intensity, it is critical for industry:

- to understand the broad contours and framework of the proposed GST law,
- likely impact of the new levy on the business,
- take appropriate steps to undertake necessary changes in business processes,
- assess financial impact,
- frame pricing strategy,
- align internal organization and IT systems, and
- be GST ready.

**Impact of GST on Indian Economy**

- Reduce tax burden on producers and foster growth through more production. This double taxation prevents manufacturers from producing to their optimum capacity and retards growth. GST would take care of this problem by providing tax credit to the manufacturer.

- Various tax barriers such as check posts and toll plazas lead to a lot of wastage for perishable items being transported, a loss that translated into major costs through higher need of buffer stocks and warehousing costs as well. A single taxation system could eliminate this roadblock for them.

- A single taxation on producers would also translate into a lower final selling price for the consumer.

- Also, there will be more transparency in the system as the customers would know exactly how much taxes they are being charged and on what bases.

- GST would add to government revenues by widening the tax base.

- GST provides credits for the taxes paid by producers earlier in the goods/services chain. This would encourage these producers to buy raw material from different registered dealers and would bring in more and more vendors and suppliers under the purview of taxation.

- GST also removes the custom duties applicable on exports. Our competitiveness in foreign markets would increase on account of lower cost of transaction.

- The proposed GST regime, which will subsume most central and state-level taxes, is expected to have a single unified list of concessions/exemptions as against the current mammoth exemptions and concessions available across goods and services

**The Negative Impact of GST:**

**Proposed GST Rate Is Higher Than VAT**

The rate of GST is proposed to be higher than the current VAT rate in India, which although reducing the price in the longer run, will be of no help in cutting down prices of commodities.

**Dual Control**

A business will be indirectly controlled by both the Centre and the State in all tax related matters. The State will lose autonomy to change the tax rate, which will be regulated by the GST Council.

**Certain Sectors Will Face a Negative Impact**
Sectors that are currently enjoying no excise duty or have enjoyed a lot of tax benefits will have to bear the brunt of a higher tax. These include Textile, Dairy Products, Media, Pharma, IT/ITeS, and Telecom. The same goes for products. It is supposed that the prices of the following commodities will increase – credit cards, mobile phones and jewellery.

**Loss Incurred By the Manufacturing States**
Since GST is mostly related to the manufacturing segment, most manufacturing states may incur losses. But the government has proposed to compensate for those losses for a period of 5 years.

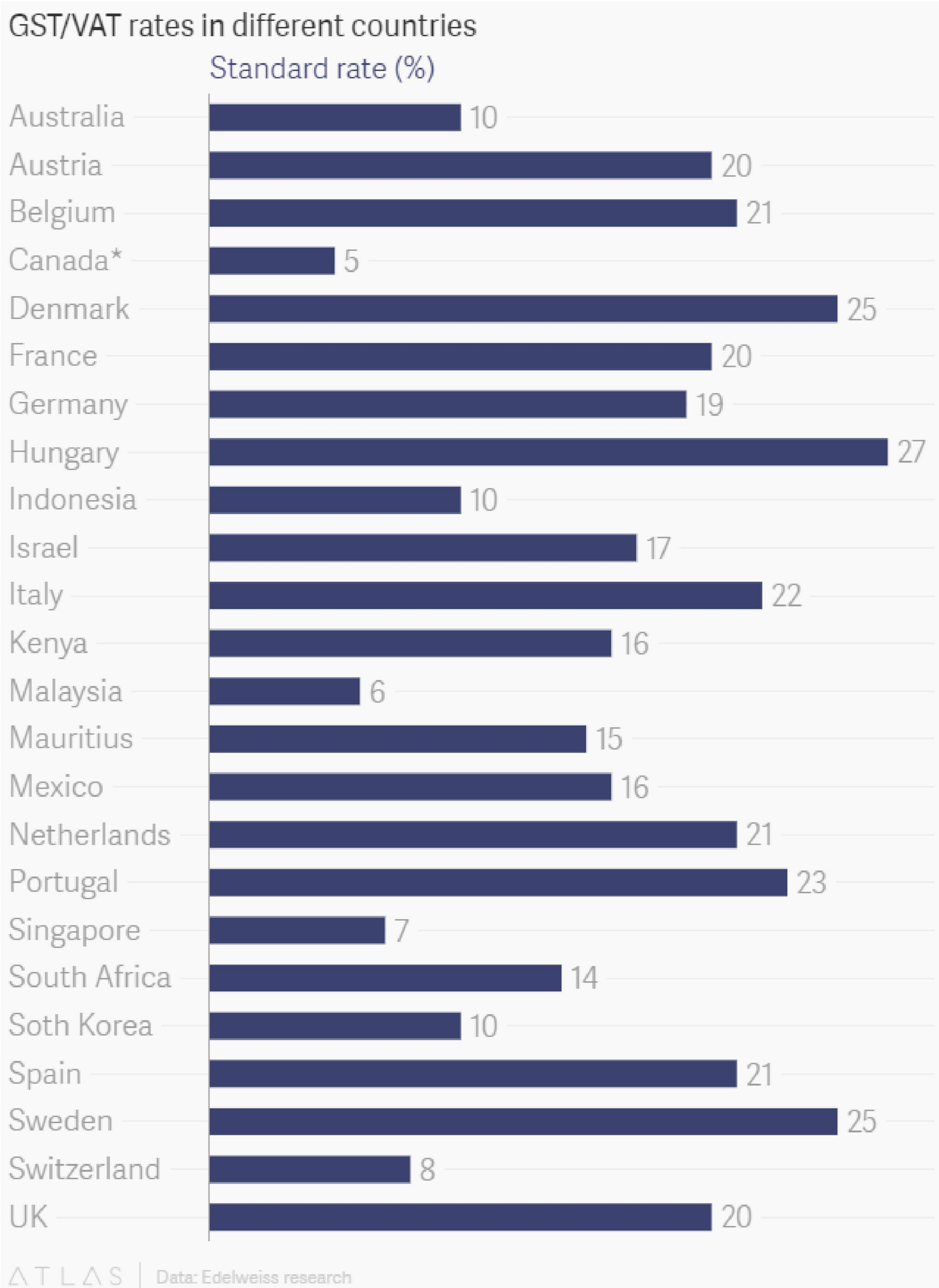
**GST and different countries**

Presently, there are around 160 countries that have implemented GST/VAT in some form or other. In some countries, VAT is the substitute for GST, but conceptually it is a destination based tax levied on consumption of goods and services.

France was the first to introduce GST.

Only Canada has dual GST model (just like India is going to implement Dual GST Model).

Rate of GST ranges between 15–20% generally (may differ to higher/lower side in few countries).


GST/VAT rates in different countries
Standard rate (%)
Australia 10
Austria 20
Belgium 21
Canada* 5
Denmark 25
France 20
Germany 19
Hungary 27
Indonesia 10
Israel 17
Italy 22
Kenya 16
Malaysia 6
Mauritius 15
Mexico 16
Netherlands 21
Portugal 23
Singapore 7
South Africa 14
Soth Korea 10
Spain 21
Sweden 25
Switzerland 8
UK 20
ATLAS
Data: Edelweiss research

**Problems faced by the different countries while implementing GST**

Similar to Indian context, it is only Canada that has the concept of dual GST. While there was strong rebel at the time of introduction of GST by the then political division in Canada, however, GST sustained despite the opposition. While some others have had to increase the rates very soon after introduction.

Another aspect encountered and accepted by most of the GST countries lies in the statistic that GST will be inflationary, especially if the effective tax rate is higher than what prevailed before. For instance, Singapore saw a spike in inflation in 1994 when it introduced the GST. That makes it all the more important for administrators to keep tabs on how prices move after imposition of the tax.

Another key refresh from Malaysia learning is that businesses need to start early with the implementation process to be GST-ready. The Malaysian Government received strong resentment even after providing 1.5 years for GST preparedness.

One constructive learning that did come handy in the GST preparation in Malaysia was the release of sector specific guidance paper(s) on tax treatment concerning each business sector. It aided in addressing the "to be tax practice" associated with a particular business segment. Indian legislative bodies could look into similar publications to effectuate the implementation of GST in a smooth way.

This is the end of today's session.

I hope you liked this session. Have a nice day. Thank you.

# MANAGEMENT INFORMATION SYSTEM(MIS)

**Hello everyone today's lecture is about MIS**

Management Information Systems (MIS) is the study of people, technology, and organizations.If you enjoy technology like iPhones, tablet pc,cell Phone with Whatsapp , Instagram, Twitter and Facebook, you have what it takes to major in information systems. All you need is an interest in technology and the desire to **use technology to improve people's lives.**Many people think that MIS is all programming. However, programming is just a small part of our curriculum and there are many, many jobs in MIS where you do not program.

Everyone who works in business, from someone who pays the bills to the person who hires and fires, uses information systems. For example, a supermarket could use a computer database to keep track of which products sell best. And a music store could use a database to sell songs over the Internet.

Information isn't worth much if it doesn't serve a purpose. In MIS students learn how businesses use information to improve the company's operations. Students also learn how to manage various information systems so that they best serve the needs of managers, staff and customers. MIS students learn how to create systems for finding and storing data and they learn about computer databases, networks, computer security, and lots more.

The subject expert is **Dr. Devendra Kumar Dhusia,**he is with Jamia Millia Islamia, A Central University located at New Delhi. He has 17 years of teaching and research experience with M.Com, MBA(IT) and Ph.D in Internet Advertising and I am ………………….

MIS is collection of three words

1. Management
2. Information and
3. System which defines separately as

**Management** is process of accomplishing task with and with help of others in available recourses, while **Information** is collection of meaningful data related to individual and **System** is collection of various components in a systematic manner to accomplish specific task. Collection of all these three words makes MIS.

The concept of the MIS has evolved over a period of time comprising many different facets of the organizational function. MIS is a necessity in all the organizations. The initial concept of MIS was to process the data available in the organization and present it in the form of reports at regular intervals. The system was largely capable of handling the data from collection to processing. It was more impersonal, requiring each individual to pick and choose the processed data and use it for his requirements. Thisconcept was further modified when a distinction was made between data and information. Information is a product of an analysis of data. This concept is similar to a raw material and the finished product. However, data can be analyzed in a number of ways, producing different shades and specifications of the information as a product. It was, therefore, demanded that the system concept be an individual- oriented, as each individual may have a different orientation towards the information.

This concept was further modified, that the system should present information in such a form and format that it creates an impact on its user, provoking a decision or an investigation. It was later realized then even though such an impact was a welcome modification, some sort of selective approach was necessary in analysis and reporting. Hence, the concept of exception reporting was imbibed in MIS. The norm for an exception was necessary to evolve in the organization. The concept remained valid till and to the extent that the norm for an exception remained true and effective. Since the environment turns competitive and is ever changing, fixation of the norm for an exception becomes a futile exercise at least for the people in the higher echelons of the organization. The concept was then evolved that the system should be capable of handling a need based exception reporting. This need maybe either of an individual or a group of people. This called for keeping all data together in such a form that it can be accessed by anybody and can be processed to suit his needs. The concept is that the data is one but it can be viewed by different individuals in different ways.

Over a period of time, when these conceptual developments were taking place, the concept of end user computing using multiple databases emerged. This concept brought afundamental change in MIS. The change was decentralization of the system and the user of the information becoming independent of computer professionals. When this becomes a reality, the concept of MIS changed to a decision making system. The job in the computer department is to manage the information resource and leave the task of information processing to the user. The concept of MIS in today's world is a system which handles the databases, provides computing facilities to the end user and gives a variety of decision making tools to the user of the system and also enable the citizens / beneficiaries to use the MIS from external source and connect with organization.

The concept of MIS gives high regard to the individual and his ability to use information. MIS gives information through data analysis. While analyzing the data, it relies on many academic disciplines. These include the theories, principles and concepts from the Management Science, Psychology and Human Behavior, making the MIS more effective and useful. These academic disciplines are used in designing the MIS, evolving the decision support tools for modeling and decision making.

The foundation of MIS is the principles of management and its practices. The concept of management Information System can be evolved for a specific objective if it is evolved after systematic planning and design. It calls for an analysis of a business, management views & policies, organization culture and the management style. Information should be generated in this setting and must be useful in managing the business. This is possible only when it is conceptualized as a system with an appropriate design. MIS, therefore, relies heavily on the systems theory and offers solutions to handle the complex situations of the input and output flows. It uses theories of communicationwhich helps to evolve a system design capable of handling data inputs, process, and outputs with the least possible noise or distortion in transmitting the information form a source to a destination. It uses the principles of system Design, Viz., an ability of continuous adjustment or correction in the system in line with the environmental change in which the MIS operates. Such a design help to keep the MIS tuned with the business managements needs of the organization.

The concept, therefore, is a blend of principle, theories and practices of the Management, Information and System giving rise to single product known as Management Information System (MIS).

**Definition**

MISis further defined as -

- **MIS** is defined as a system which provides information support for decision making in the organization.
- **MIS** is defined as an integrated system of man and machine for providing the information to support the operations, the management and the decision making function in the organization.
- **MIS** is defined as a system based on the database of the organization evolved for the purpose of providing information to the people in the organization.

**Introduction**

Management information system (MIS) provides information that organizations require to manage themselves efficiently and effectively. MIS makes decision makers work easy, Manger does not have to go through thick reports. Management information systems are typically computer systems used for managing the organizations.Management information systems are distinct from other information systems because they are used to analyze and facilitate strategic and operational activities. Academically, the term is commonly used to refer to the study of how individuals, groups, and organizations evaluate, design, implement, manage, and utilize systems to generate information to improve efficiency and effectiveness of decision making, including systems termed decision support systems, expert systems, and executive information systems. The five primary components of MIS are:

1) Hardware

2) Software

3) Data -meaningful information for decision making

4) Procedures -design, development and documentation, and

5) People -individuals, groups, or organizations.

MIS empower other systems also like decision support systems, expert systems, and executive information systems.

**History of MIS**

Kenneth C. Laudon and Jane Laudon identify five eras of Management Information System evolution corresponding to the five phases in the development of computing technology: 1) Mainframe and minicomputer computing,

2) Personal computers,

3) Client/server networks,

4) Enterprise computing, and

5) Cloud computing.

The first era of mainframe and minicomputer was ruled by IBM and their mainframe computers. These computers would often take up whole rooms and require teams to run them - IBM supplied the hardware and the software. As technology advanced, these computers were able to handle greater capacities and therefore reduce their cost..

The second era is of personal computer began in 1965 as microprocessors started to compete with mainframes and minicomputers and accelerated the process ofdecentralizing computing power from large data centers to smaller offices. In the late 1970s minicomputer technology gave way to personal computers and relatively low cost computers were becoming mass market commodities, allowing businesses to provide their employee's access to computing power that ten years before would have cost lakhs of rupees.

As technological complexity increased and costs decreased, the need to share information within an enterprise also grew, giving rise to the third era of client and server, in which computers on a common network access shared information on a server. This lets thousands and even millions of people access data simultaneously. The fourth era of enterprises enabled by high speed networks, tied all aspects of the business enterprise together offering rich information access encompassing the complete management structure. Every computer is utilized.

The fifth era is cloud computing is the latest and employs networking technology to deliver applications as well as data storage independent of the configuration, location or nature of the hardware. This, along with high speed cell phone and Wi-Fi networks, led to new levels of mobility in which managers access the MIS remotely with laptop and tablet computers, plus smart phones.

**MIS in an Organization**

The role of the MIS in an organization can be compared to the role of heart in the body. The information is the blood and MIS is the heart. In the body the heart plays the role of supplying pure blood to all the elements of the body including the brain. The heart works faster and supplies more blood when needed. It regulates and controls the incoming impure blood, processes it and sends it to the destination in the quantity needed. It fulfills the needs of blood supply to human body in normal course and also in crisis.MIS plays exactly the same role in the organization.

The system ensures that anappropriate data is collected from the various sources, processed, and sent further to all the needy destinations. The system is expected to fulfill the information needs of an individual, a group of individuals, the management functionaries, the managers and the top management. MIS satisfies the diverse needs through a variety of systems such as Query Systems, Analysis Systems, Modeling Systems and Decision Support Systems, MIS helps in Strategic Planning, Management Control, Operational Control and Transaction Processing.

MIS helps the clerical personnel in the transaction processing and answers their queries on the data pertaining to the transaction, the status of a particular record and references on a variety of documents. MIS helps the junior management personnel by providing the operational data for planning, scheduling and control, and helps them further in decision making at the operations level to correct an out of control situation.

MIS helps the middle management in short them planning, target setting and controlling the business functions. It is supported by the use of the management tools of planning and control. MIS helps the top management in goal setting, strategic planning and evolving the business plans and their implementation. MIS plays the role of information generation, communication, problem identification and helps in the process of decision making. MIS, therefore, plays a vital role in the management, administration and operations of an organization.

**Office Automation Systems (OAS)**

Office automation refers to the application of computes and communication technology to office functions. Office automation systems are meant to improve the productivity of managers at various levels of management of providing secretarial assistance and better communication facilities. Office activities may be grouped under two classes, namely

i)Activities performed by clerical personnel like clerks, secretaries, typist, etc., and

ii)Activities performed by the executives, managers, engineers or other professionals like economist, researches etc.

In the first category, the following is a list of activities.

a) Typing

b)Mailing

c)Scheduling of meetings and conferences,

d) Calendar keeping, and

e)Retrieving documents.

The following is a list of activities in the second category which is managerial category

a)Conferencing.

b)Production of information messages, memos, reports, etc. and

c) Controlling performance.

**Business Expert Systems:**These systems are one of the main types of knowledge-based information systems. These systems are based on artificial intelligence, and are advanced information systems. A business expert system is a knowledge based information system that uses its knowledge about a specific, complex application area to act as an expert. The main components of an expert system are:

a. Knowledge Base
b. Interface Engine
c. User Interface

**Executive Support System (ESS)**

Executive Support System (ESS) is an extension of the management information system, which is a special kind of decision support system (DSS); An Executive support system (ESS) is specially tailored for the use of chief executive of an organization to support his decision-making. It includes various types of decision-making but it is more specific and person oriented.

## Transaction Processing System(TPS)

TPS processes transaction and produces reports. It represents the automation of the fundamental, routine processing used to support business operations. It does not provide any information to the user to his/her decision-making. TPS uses data and produces data as shown in the following diagram. Previously, TPS was known as Management Information System. Prior to computers, data processing was performed manually or with simple machines. The domain of TPS is at the lowest level of the management hierarchy of an organization.

## MIS Physical View

The Physical view of the MIS can be seen as an assembly of several subsystems based on the databases in the organization. These subsystems range from data collection, transaction processing and validating, processing, analyzing and storing the informationin databases. The subsystem could be at a functional level or a corporate level. The information is evolved through them for a functional or an operational management and it provides the information for the management of business at the corporate level and also analyzes and provides huge data for the governments in a systematic way for analysis and for designing welfare schemes.

MIS, therefore, is a dynamic concept subject to change, time and again, with a change in the business management process. It continuously interacts with the internal and the external environment of the business and provides a corrective mechanism in the system so that the changed needs of information are met effectively. MIS, therefore, is a dynamic design, the primary objective of which is to provide the information for decision making and it is developed considering the organizational fabric, giving due regard to the people in the organizational the management functions and the managers and the managerial control.

## MIS structure based onManagement activity

**Hierarchy of Management Activity:**The following categories of management planning and control were defined by Anthony.

| LEVEL | COMMENTS |
|---|---|
| **Strategic planning** | Definition of goals, policies, and generalguidelines charting course for organization.Determination of organizational objectives. |
| **Management controland tactical planning** | Acquisition of resources.Acquisition tactics, plant location, new products.Establishment and monitoring of budgets. |
| **Operational planningand control** | Effective and efficient use of existing facilitiesand resources to carry out activities withinbudget constraints. |

**Role of Management Information Systems in an Organization**

The role of the MIS in an organization can be compared to the role of heart in the body. The information is the blood and MIS is the heart. In the body the heart plays the role of supplying pure blood to all the elements of the body including the brain. The heart works faster and supplies more blood when needed. It regulates and controls the incoming impure blood, processes it and sends it to the destination in the quantity needed. It fulfills the needs of blood supply to human body in normal course and also in crisis.MIS plays exactly the same role in the organization. The system ensures that anappropriate data is collected from the various sources, processed, and sent further to all the needy destinations. The system is expected to fulfill the information needs of an individual, a group of individuals, the management functionaries, the managers and the top management. MIS satisfies the diverse needs through a variety of systems such as Query Systems, Analysis Systems, Modeling Systems and Decision Support Systems, MIS helps in Strategic Planning, Management Control, Operational Control and Transaction Processing.

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MIS helps the middle management in short them planning, target setting and controlling the business functions. It is supported by the use of the management tools of planning and control. MIS helps the top management in goal setting, strategic planning and evolving the business plans and their implementation. MIS plays the role of information generation, communication, problem identification and helps in the process of decision making. MIS, therefore, plays a vital role in the management, administration and operations of an organization.

**Advantages of MIS**

The following are some of the benefits that can be attained through MIS.

Organizations are able to highlight their strengths and weaknesses due to the presence of revenue reports, employees' performance records etc. The identification of these aspects can help the company improve their business processes and operations. MIS gives an overall picture of the company and acts as a communication and planning tool.

The availability of customer data and feedback in the MIS can help the company to align their business processes according to the needs of the customers. The effective management of customer data can help the company to perform direct marketing and promotion activities. MIS can help an organization to gain a competitive advantage. Competitive advantage is a firm’s ability to do something better, faster, cheaper, or uniquely, when compared with rival firms in the market.

**Public Sector Unit (PSU) and MIS**

If an MIS has to become successful then it should have all the features listed as follows.

- MIS is integrated into the managerial functions. It sets clear objectives to ensure that the MIS focuses on the major issues of the business. Adequate developmentresources are provided and the human & organizational barriers to progress areremoved.
- An appropriate information processing technology required to meet the data processing and analysis needs of the users of the MIS is selected.
- MIS is oriented, defined and designed in terms of the user's requirements and its operational viability is ensured.
- MIS is kept under continuous surveillance, so that its open system design is modified according to the changing information needs.
- MIS focuses on the results and goals, and highlights the factors and reasons for non-achievement.
- MIS is not allowed to end up into an information generation mill avoiding the noise in the information and the communication system.
- MIS recognizes that a manager is a human being and therefore, the systems must consider all the human behavioral factors in the process of the management.
- MIS recognizes that the different information needs for different objectives must be met with. The globalization of information in isolation from the different objectives leads to too much information and its non-use.
- MIS is easy to operate and, therefore, the design of the MIS has such features which make up a user-friendly design.
- MIS recognizes that the information needs become obsolete and new needs emerge. MIS design, therefore, has a basic potential capability to quickly meet new needs of information.
- MIS concentrates on developing the information support to manage critical success factors. It concentrates on the mission critical applications serving the needs of top management.

**Failure, Success and managing of Information System**

Most information systems including current ICT projects in developing countriesfail either totally or partially. Some of the failed MIS projects in the PSUs are as follows:

i) India's Indira Gandhi Conservation Monitoring Centre was intended to be a national information provider based on a set of core environmental information systems. Despite more than a year of planning, analysis and design work, these information systems never became operational, and the whole initiative collapsed shortly afterwards.

ii) Tax Computerisation Project in Bihar Revenue Department set out seven areas of taxation that were to be computerised. At the end of the project, only two areas had been partly computerised, and five others were not operational.

**Future**

In the future management information systems to address all area of business which will likely be of five general types:

1) Software for systems analysis,
2) Theory testing, software for teaching purposes,
3) Software for advisors,
4) Software for use by producers, and
5) Software to control and monitor the supply chain.

If this transition from the "old economy" to the "new economy" occurs for Business, then the information systems of the past will not be adequate for the future. They will need to be much broader and more comprehensive than the current systems. The future systems must:

- address the larger scope of financial management rather than financial record keeping, tax reporting, implementation of new Tax system like GST and analysis;
- help define marketing strategies and alliances;
- help identify potential niche markets rather than supplying data on current commodity market trends;
- support the creation of new ideas;
- nurture the growth of knowledge since this will become a major source of wealth creation;
- deal with the many dimensions and complexity of human resource management;
- signal needed production changes in an overall system of supply chain management;
- assist in negotiating contractual arrangements;

- help the producer adopt to an economic climate that has more risk and uncertainty because of less government intervention in markets;
- provide the capacity to track the identify of a product from its genetics to the consumer;
- assist in producing a product that meets customer desires rather than the production of a commodity.

**Conclusion**

As seen from the introduction to MIS, the Indian PSUs have been very slow to adapt the new trends in IT and though MIS have been developed by few PSUs they have not been able to deliver the desired output. The procedure employed to develop the MIS in most of the PSUs has not been correct and the appropriate software methodology of development of MIS has not been followed.

Most of the PSUs have not reengineered the exiting redundant systems before going for automation and MIS was designed by the PSUs without GPR (Govt. Process Reengineering) because of which considerable reluctance has been observed from the common man using the services of the PSUs. Indian PSUs have failed to use the latest technologies available in the market and have not incorporated sufficient safety measures while designing the MIS and more importance was given to the technical competence ignoring the domain knowledge. Common strategies for development of MIS have not been adopted by all the PSUs which developing the MIS and sometimes the wheel have been repeated instead of replicating the success achieved.

Hence it is clear that there is an urgent need to study current process of MIS development in PSUs and other areas which assesses its performance from the angle of all the stakeholders and evolve a common & successful theory for MIS.

This is the end of today’s session. I Hope you liked this session. Have a nice day. Thank you

**Management Information System**

## SUMMARY

The role of the MIS in an organization can be compared to the role of heart in the body. The information is the blood and MIS is the heart. In the body the heart plays the role of supplying pure blood to all the elements of the body including the brain. The heart work faster and supplies more blood when needed. It regulates and controls the incoming impure blood, processed it and sends it to the destination in the quantity needed. It fulfills the needs of blood supply to human body in normal course and also in crisis. The MIS plays exactly the same role in the organization. The system ensures that an appropriate data is collected from the various sources, processed and send further to all the needy destinations. The system is expected to fulfill the information needs of an individual, a group of individuals, the management functionaries: the managers and top management.

MIS plays a very important role in the organization; it creates an impact on the organization's functions, performance and productivity. The impact of MIS on the functions is in its management with a good MIS supports the management of marketing, finance, production and personnel becomes more efficient. The tracking and monitoring of the functional targets becomes easy. The functional managers are informed about the progress, achievements and shortfalls in the activity and the targets. The manager is kept alert by providing certain information indicating and probable trends in the various aspects of business. This helps in forecasting and long-term perspective planning. The manager's attention is bought to a situation which is expected in nature, inducing him to take an action or a decision in the matter. Disciplined information reporting system creates structure database and a knowledge base for all the people in the organization. The information is available in such a form that it can be used straight away by blending and analysis, saving the manager's valuable time.

## Objectives

Upon successful completion of this lecture, students will be able to:

- Define and understand the concept of Management Information System (MIS).
- Explain the role of Management Information System (MIS) in an organization.
- Understand the advantages of Management Information System (MIS)
- Know the functions of Management Information System (MIS) in Public sector units (PSUs)
- Understand the scope future requirements of Management Information System (MIS)

## Frequently Asked Questions

### 1. What is Management Information System (MIS)?

MIS is collection of three words i.e. Management, Information and System, whereas **Management** is process of accomplishing task with and with help of others in available recourses, while **Information** is collection of meaningful data related to individual and **System** is collection of various components in a systematic manner to accomplish specific task. Management information systems are typically computer systems used for managing the organizations. Management information system (MIS) provides information that organizations are required to manage themselves efficiently and effectively and makes decision making easier.

### 2. What is the importance of Management Information System (MIS)?

In current situations of Information Age and Globalization managers must be equipped with some tools or a system, which can assist them in their challenging role of decision-making. It is because of the above cited reasons, that today MIS is considered to be of permanent importance, sometimes regarded as the name centre of an organization. Such system assist decision makers in organizations by providing information at various stages of decision making and thus greatly help the organizations to achieve their predetermined goals and objectives.

### 3. What are the important roles of Management Information System (MIS)?

i. The MIS satisfies the diverse needs through variety of systems such as query system, analysis system, modelling system and decision support system.

ii. The MIS helps in strategic planning, management control, operational control and transaction processing. The MIS helps in the clerical personal in the transaction processing and answers the queries on the data pertaining to the transaction, the status of a particular record and reference on a variety of documents.

iii. The MIS helps the junior management personnel by providing the operational data for planning, scheduling and control , and helps them further in decision-making at the operation level to correct an out of control situation.

iv. The MIS helps the middle management in short term planning, target setting and controlling the business functions. It is supported by the use of the management tools of planning and control.

v. The MIS helps the top level management in goal setting, strategic planning and evolving the business plans and their implementation.

vi. The MIS plays the role of information generation, communication, problem identification and helps in the process of decision-making. The MIS, therefore, plays a vital role in the management, administration and operation of an organization.

4. **What are the different types of Management Information System?**

   There are following types of MIS

   (a) Accounting management information systems
   (b) Financial management information systems
   (c) Manufacturing management information systems
   (d) Marketing management information systems
   (e) Human resources management information systems

5. **What is Financial management information systems**

   Financial management information systems: The financial management information system provides financial information to all financial managers within an organization including the chief financial officer. The chief financial officer analyzes historical and current financial activity, projects future financial needs, and monitors and controls the use of funds over time using the information developed by the MIS department.

6. **Explain Marketing management information systems:**

   Marketing management information systems: A marketing management information system supports managerial activity in the area of product development, distribution, pricing decisions, promotional effectiveness, and sales forecasting. More than any other functional area, marketing systems relies on external sources of data. These sources include competition and customers, for example.

7. **Explain Human resources management information systems**

   Human resources management information systems: Human resources management information systems are concerned with activities related to workers, managers, and other individuals employed by the organization. Because the personnel function relates to all other areas in business, the human resources management information system plays a valuable role in ensuring organizational success. Activities performed by the human resources management information systems include, work-force analysis and planning, hiring, training, and job assignments

**QUIZ**

1. Which of the following systems deals with planning for, development, management, and use of information technology tools for management?

(a) Strategic Support Systems
(b) Administrative Systems
(c) **Management Information Systems**
(d) Operational Systems

2. Which of the following terms is used to describe the computer-based tools used by people in an organization to support their information processing needs?

**(a) Information Technology**
(b) User Systems
(c) Artifacts
(d) Computer Tools

3. Which type of technology allows you to send information from one computer to another?

(a) Output
(b) Telecommunication
**(c) Connecting**
(d) CPU

4. What term is used to describe information coming into a computer that is in bad form, or is incorrect, and will improperly affect the decision-making process?

**(a) GIGO**
(b) Tainted data
(c) Dirty information
(d) Scrubbed data

5. Management information systems (MIS)

(a) **Create and share documents that support day-today activities**
(b) Process business transactions (e.g., time cards, payments, orders, etc.)
(c) Capture and reproduce the knowledge of an expert problem solver

6. The person who ensures that systems are developed on time, within budget, and with acceptable quality is a

(a) systems designer
**(b) project manager**
(c) systems owner

(d) external system user
(e) systems builder

7. .............................. is specially tailored for the use of executive of an organization to support his decision-making.

**(a) ESS**
(b) DBS
(c) CBS
(d) None of the above

## GLOSSARY

**Artificial intelligence (AI):** The effort to develop computer-based systems that can behave like humans, with the ability to learn languages, accomplish physical tasks, use a perceptual apparatus, and emulate human expertise and decision making.

**Arithmetic-logic unit (ALU):** Component of the CPU that performs the computer's principal logic and arithmetic operations.

**Application service provider (ASP):** Company providing software that can be rented by other companies over the Web or a private network.

**Broadband:** High-speed transmission technology. Also designates a single communications medium that can transmit multiple channels of data simultaneously.

**Business-to-business (B2B) electronic commerce:** Electronic sales of goods and services among businesses.

**Business-to-consumer (B2C) electronic commerce:** Electronic retailing of products and services directly to individual consumers.

**Customer relationship management (CRM):** Business and technology discipline that uses information systems to coordinate all of the business processes surrounding the firm's interactions with its customers in sales, marketing, and service.

**Data-driven DSS:** A system that supports decision making by allowing users to extract and analyze useful information that was previously buried in large databases.

**Database management system (DBMS):** Special software to create and maintain a database and enable individual business applications to extract the data they need without having to create separate files or data definitions in their computer programs.

**Decision-support systems (DSS):** Information systems at the organization's management level that combine data and sophisticated analytical models or data analysis tools to support semi-structured and unstructured decision making.

**File transfer protocol (FTP):** Tool for retrieving and transferring files from a remote computer.

**Hypertext markup language (HTML):** Page description language for creating Web pages and other hypermedia documents.

**Internet Protocol (IP) address:** Four-part numeric address indicating a unique computer location on the Internet

**Local area network (LAN):** A telecommunications network that requires its own dedicated channels and that encompasses a limited distance, usually one building or several buildings in close proximity.

**ASSIGNMENT**

1. What is Management Information System (MIS)?
2. What are the types of Management Information System (MIS)?
3. What are the roles and impact of Management Information System (MIS) in an organization?
4. Enumerate the functions of Management Information System (MIS) in Public sector units (PSUs)
5. Elaborate the future scope and requirements of Management Information System (MIS).

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# LIVE - 7th-8th August, 2018

1 message

**Kanchan Kachroo** <kanchan_kachroo@yahoo.co.in> Wed, Aug 1, 2018 at 11:16 AM
Reply-To: Kanchan Kachroo <kanchan_kachroo@yahoo.co.in>
To: Harjeet Bhatia <harjeetkaurbhatia@gmail.com>, "Harjeet Bhatia (Head Dept. of Educational Studies)" <hbhatia@jmi.ac.in>

Dear Ma'am

As per our discussion, I will book slots for your LIVE Telecast scheduled to be held on **August 7th and 8th, 2018.**

The topic for the Telecasts will be - **APPROACHES TO ASSESSMENT OF LEARNING MATHEMATICS**

Please include the following subtopics in your Preparation:

**Date: 7/8/18**

| | | |
|---|---|---|
| Lecture 68 | 504 Unit 10 | Characteristics of traditional approach |
| Lecture 69 | 504 Unit 10 | Characteristics of assessment in the Activity-based approach |
| Lecture 70 | 504 Unit 10 | Dimensions of mathematical learning included for assessment at the Elementary stage |
| Lecture71 | 504 Unit 10 | Emerging trends in assessment: Self assessment |
| Lecture72 | 504 Unit 10 | Emerging trends in assessment: peer/group assessment |

**Date: 8/8/18**

| | | |
|---|---|---|
| Lecture73 | 504 Unit 10 | Emerging trends in assessment: collaborative assessment |
| Lecture74 | 504 Unit 10 | Emerging trends in assessment: portfolio assessment |
| Lecture75 | 504 Unit 10 | Emerging trends in assessment: Assessment through assignments |
| Lecture76 | 504 Unit 10 | Emerging trends in assessment: projects |
| Lecture77 | 504 Unit 10 | Emerging trends in assessment: concept mapping |

Please find attached content for your reference.
Kindly prepare your PPTs following the format:
Please ensure that PPTs have Font Heading size 24-30 pnts; Subheading size 22-26 pnts; Body size 20-24 pnts; Frame size full screen 4:3 and fonts must be clear, legible against a soft coloured background with only 4-5 lines in each slide. Also include pictures and visuals to support the content. Mail the final PPTs 1 day prior to your telecast date on vagda@nios.ac.in

Sending your Invitation Letter shortly.

Warm regards
Dr. Kanchan Kachroo
Training Officer(Edu)
NIOS HQs
Kanchankachroo7@gmail.com
M-9654366679

**U-10.pdf**
156K

Gmail

Harjeet Bhatia <harjeetkaurbhatia@gmail.com>

# LIVE

1 message

**Kanchan Kachroo** <kanchan_kachroo@yahoo.co.in> Tue, Oct 9, 2018 at 6:12 PM
Reply-To: Kanchan Kachroo <kanchan_kachroo@yahoo.co.in>
To: Harjeet Bhatia <harjeetkaurbhatia@gmail.com>

Dear Ma'am

As per our discussion, I will book a slot for your LIVE Telecasts scheduled to be held on **October 15 and 17, 2018.**

The topic for the Telecast will be -
**For Oct 15, 2018 -**

EDUCATION OF CHILDREN WITH SPECIAL NEEDS

Please include the following subtopics in your Preparation:

Lecture 35 506 Unit 9 Classroom management and CWSN

The topic for the Telecast will be -

**For October 17, 2018**

EMPOWERING GIRL CHILDREN

Please include the following subtopics in your Preparation:

Lecture 43 506 Unit 12 Concept of Empowerment:
Meaning of Empowerment
• Indicators of Empowerment
• Need for Empowering Girls

Kindly prepare your PPTs following the format:
Please ensure that PPTs have Font Heading size 24-30 pnts; Subheading size 22-26 pnts; Body size 20-24 pnts; Frame size full screen 4:3 and fonts must be clear, legible against a soft coloured background with only 4-5 lines in each slide. Also include pictures and visuals to support the content. Mail the final PPTs 1 day prior to your telecast date on vagda@nios.ac.in

With regards
Dr. Kanchan Kachroo
Training Officer(Edu)
NIOS HQs
Kanchankachroo7@gmail.com
M-9654366679

**2 attachments**

**506B-3-U-9.pdf**

115K

**506B-4-U-12.pdf**
161K

Gmail **Harjeet Bhatia <harjeetkaurbhatia@gmail.com>**

# LIVE Dated April 18, 2019

5 messages

**Kanchan Kachroo** <kanchan_kachroo@yahoo.co.in> Fri, Apr 12, 2019 at 12:29 PM
Reply-To: Kanchan Kachroo <kanchan_kachroo@yahoo.co.in>
To: Harjeet Bhatia <harjeetkaurbhatia@gmail.com>, "Prof. Harjeet K. Bhatia (D/o Educational Studies)" <hbhatia@jmi.ac.in>

Madam,

As per our discussion, we shall book a slot for your LIVE Telecast scheduled to be held on **April 18, 2019 from 3:00 pm to 5:00 pm.** You are requested to kindly be present by 2:00 pm for the preparation of the Programme.
1) Prof. Harjeet Kaur Bhatia
2) An expert you bring along as a co-presenter (kindly intimate their name and details to us)

The topic for the Telecast will be - **Course Code 506 Unit 8 Concept of CWSN (Children with Special Needs)**

Please include the following subtopics in your preparation:

Lecture 25 506 Unit 8 Defining CWSN • Categories/types of disabilities (mental, physical, emotional, behavioural, learning, etc.) and their effect of children growth

Lecture 26 506 Unit 8 Factors affecting the growth of disabled children, why are they referred as "Waiting Children", • Early identification, assessment and intervention

Lecture 27 506 Unit 8 PWD Act 1994, Role of Central and State Governments

Lecture 28 506 Unit 8 How a teacher can play a vital role in handling the CWSN in classroom • Role of teacher to identity and address CWSN

Lecture 29 506 Unit 8 Learning requirements of CWSN at elementary stage

Kindly prepare your PPTs following the format:
Please ensure that PPTs have Font Heading size 24-30 pnts; Subheading size 22-26 pnts; Body size 20-24 pnts; Frame size full screen 4:3 and fonts must be clear, legible against a soft coloured background with only 4-5 lines in each slide. Also include pictures and visuals to support the content. Mail the final PPTs 1 day prior to your telecast date on vagda@nios.ac.in

With regards
Dr. Kanchan Kachroo
Training Officer(Edu)
NIOS HQs
Kanchankachroo7@gmail.com

M-9654366679

**Block3_506.pdf**
405K

**Harjeet Bhatia** <harjeetkaurbhatia@gmail.com> Sun, Apr 14, 2019 at 12:38 PM
To: shabbir ahmed <ibnesami@gmail.com>

[Quoted text hidden]
--
Prof. Harjeet Kaur Bhatia
Professor,
Department of Educational Studies,
Jamia Millia Islamia.
New Delhi-110025.

**Block3_506.pdf**
405K

**Harjeet Bhatia** <harjeetkaurbhatia@gmail.com> Wed, Apr 17, 2019 at 1:32 PM
To: Kanchan Kachroo <kanchan_kachroo@yahoo.co.in>, shabbir ahmed <ibnesami@gmail.com>

Dear Madam

PFA the pptfor tomorrow's live presentation.
Co presenter along with me would be Mr. Shabbir Ahmad,Assistant Professor(on Contract) in Deptt of Educational studies, Jamia Millia Islamia.
This unit may require another day.

thanks
Best

Prof. Harjeet Kaur Bhatia

[Quoted text hidden]
[Quoted text hidden]

**CWSN Final.pptx**
210K

**Harjeet Bhatia** <harjeetkaurbhatia@gmail.com> Wed, Apr 17, 2019 at 1:58 PM
To: Kanchan Kachroo <kanchan_kachroo@yahoo.co.in>, shabbir ahmed <ibnesami@gmail.com>

[Quoted text hidden]

**CWSN NIOS.pptx**
197K

**Harjeet Bhatia** <harjeetkaurbhatia@gmail.com> Wed, Apr 17, 2019 at 8:26 PM
To: Kanchan Kachroo <kanchan_kachroo@yahoo.co.in>, shabbir ahmed <ibnesami@gmail.com>

[Quoted text hidden]

**CWSN NIOS.pptx**
199K

JAMIA MILLIA ISLAMIA
(A Central University by an Act of Parliament)
UGC-Human Resource Development Centre
Maulana Mohammed Ali Jauhar Marg, New Delhi 110025
Tel. : 011-26926049, Telefax : 011-26926051, EPABX : 26981717, Extn. 4200, 4202, 4203, 4204
E-mail : dir.ascjmi@rediffmail.com, hrdc@jmi.ac.in

20 August 2018

Prof. Farhat Nasreen
Department of History & Culture, JMI, New Delhi

Dear Madam/Sir,

We are happy to inform you that the Ministry of Human Resource Development (MHRD) has declared the **Human Resource Development Centre , Jamia Millia Islamia as National Resource Centre in Gender/ Women's Studies for conducting Annual Refresher Course for all in-service Higher Education Faculty** using MOOCs through SWAYAM platform.

As you are an expert in your field, I take the opportunity to request you to kindly prepare **online teaching learning material (TLM)** with focus on latest developments in the discipline, new & emerging trends, pedagogical improvements and methodologies for transacting revised curriculum on **Different Forms of Violence against women latest by 10 September 2018.**

After completion of the TLM, the lecture by you on the same theme will also be recorded for On Camera Presentation at UGC HRDC Jamia Millia Islamia. Since, it is a time bound assignment and needs to be completed within timelines.

Kindly do ensure that the TLM is prepared in accordance with the SWAYAM guidelines. **The module on the said theme is to be prepared 2500 to 3000 words**, in a way that it covers 20 to 30 minutes of presentation followed by Assessment (MCQs, fill in the blanks, quiz, matchmaking etc.) and Discussion of 15 minutes each. The Assessment and points for discussion are to be mentioned in the TLM also. **The online reference material also needs to be given while preparing the TLM.**

**As per the Govt. Of India Instructions your TA/DA/Honorarium will be transferred to your bank account. Please furnish the following information: Bank Account Number, IFSC Code and PAN.**

**A line in confirmation will highly be appreciated.**

With kind regards,

Yours sincerely,

Prof. Anisur Rahman
NRC Coordinator & Director
Ph- 9868943284

JAMIA MILLIA ISLAMIA
(A Central University by an Act of Parliament)
UGC-Human Resource Development Centre
Maulana Mohammed Ali Jauhar Marg, New Delhi 110025
Tel. : 011-26926049, Telefax : 011-26926051, EPABX : 26981717, Extn. 4200, 4202, 4203, 4204
E-mail : dir.ascjmi@rediffmail.com, hrdc@jmi.ac.in

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**A line in confirmation will highly be appreciated.**

With kind regards,

Yours sincerely,

Prof. Anisur Rahman
NRC Coordinator & Director
Ph- 9868943284

ज्ञान-विज्ञान विमुक्तये

**UNIVERSITY GRANTS COMMISSION**
**BAHADUR SHAH ZAFAR MARG**
**NEW DELHI-110 002**

No.F.1-6/2018 (AAC/MOOCs) 18th May, 2018

18 MAY 2018

The
Registrar
Jamia Millia Islamia
Maulana Mohammad Ali Jauhar Marg, Jamia Nagar, New Delhi, Delhi 110025

**Name of the Project:** Development of Non-Technology PG Degree Online Courses for SWAYAM

**Name of Course Coordinator (CC):** Dr. Krishna Sankar Kusuma

**Course Name:** Media Content Production on Multiple Platforms

**Number of Credits:** 4credit

**Name of the Host Institute having agreed for conduct of examination and transfer of the Credit:** Jamia Millia Islamia, Maulana Mohammad Ali Jauhar Marg, Jamia Nagar, New Delhi, Delhi 110025

The UGC has received the acceptance of Dr. Krishna Sankar Kusuma, Assistant Professor, Department of AJK Mass Communication Research Centre, Jamia Millia Islamia for development of MOOCs course in Media Content Production on Multiple Platforms in response to UGC's email dated 13th April, 2018 , conveying UGC's ***"in principle"*** approval of the detailed proposal for non-technology PG MOOCs for SWAYAM Platform.
I am directed to inform you that, the UGC is releasing 10% of the total MOOCs cost as the first instalment for preparing Course material for the first week of the MOOCs course.

| **Sr. No.** | **Name of the Course** | **Amount allocated per Course** | **Amount being released ( 10 % of the total cost )** |
|---|---|---|---|
| | | (Rs in lakhs) | Rs |
| 1 | | 13.50 | 1.35 (One lakh thirty five thousand only) |

**Here it may be mentioned that the final approval of the course is subject to the approval of the one week course content by the UGC Academic Advisory Council.**

The Course Coordinator has full autonomy to utilize the funds/budget as per his/her wisdom in the MHRD approved budget heads mentioned below. ( ***This budget head may be used as reference for utilising the 10 % being released now and on approval of the course for subsequent utilisation of funds.*** )

**A. Development of new MOOCs:**

***Teaching Learning Material(TLM) & On-Camera Presentation***

| S. No. | Details | Rs. in Lakhs |
|---|---|---|
| 1 | Preparation of the TLM, assessment, presentations, online reference material etc. including transcript - for 40 hours course material | 1.50 |
| 2 | On Camera presentation by SME (Subject Matter Expert) @ Rs. 5000 per module (30 minutes) | 2.00 |
| 3 | Academic Review with two subject matter experts (for all four quadrant material) @ Rs. 1000 per module (30 minutes) | 0.80 |
| 4 | Technical review by one technical expert @ Rs. 500 per module (30 minutes) | 0.20 |
| | **Sub-Total (SI. No 1 to 4) payment to SMEs and Reviewers (for 40 hours)** | **4.50** |

***B. Video Production (Tentative - 40 hours):***

| S. No. | Details | Rs. in lakhs |
|---|---|---|
| **1.** | Production cost (including cost of studio, set, crew and instructional designer) | 5.25 |
| 2. | Multimedia or outdoor shootinq inputs | 1.75 |
| 3. | Post production (@ Rs. 5.000 per hour) | 2.00 |
| | **Sub-Total (SI. No 1 to 3) Video Production Cost** | **9.00** |
| | **Grand Total ( A + B) =** | **13.5** |

On approval of the first week course by UGC Academic Advisory Committee (SMEGs), the remaining grant shall be released in two instalments of 70% & 20% of which 20% grant will be released only after successfully uploading the Course on the SWAYAM Platform.

Further, this is to inform that MHRD does not allow institutional/ overhead charges in this project and institute/university is requested to release the entire funds to Course-Coordinator(CC) and allow CC to utilize it for development of MOOCs Course.

Yours faithfully,

Diksha Rajput

**(Dr. Diksha Rajput)**
Publication Officer

DR. DIKSHA RAJPUT
Publication Officer
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi-110002

ClearAll

Categories Clear
- Arts and Recreation (1)
- General (1)
- Language (1)

Language Clear
- English (3)

Learning Path Clear
- Certificate (1)
- Post graduate (1)
- Undergraduate (1)

Course Rating Clear
- 4 Stars & above
- 3 Stars & above
- 2 Stars & above
- 1 Star & above

Universities Clear
- Jamia Millia Islamia (2)
- Indira Gandhi National Open University (1)

Faculties Clear
- Dr.K.S. Kusuma (2)
- Shivaji Bhaskar (1)

Course Credit Clear
- Yes (2)
- No (1)

Scheduled Courses Self-paced Courses

3 Scheduled Courses found for "Introduction to..." Clear Search

Course Filter: All
Sort By: Start date

## Basics of Russian: Communication Skills- Part 1 Theory

Shivaji Bhaskar
Indira Gandhi National Open University

Start Date: 16/12/2016 End Date: 17/03/2017 Enrollment End Date: 17/03/2017

6 TUTORIALS | 1 TESTS | 0 ASSIGNMENTS

**0 Hours** Investment | **Type** Scheduled

3.5/5 (4 ratings)
Language English | Credits 0
Free
LEARN MORE

## Introduction to Audio-Visual Media

Dr.K.S. Kusuma
Jamia Millia Islamia

Start Date: 10/08/2017 End Date: 30/11/2017 Enrollment End Date: 30/11/2017

177 TUTORIALS | 18 TEST | 2 ASSIGNMENTS

**20 Hours** Investment | Credit Certificate | **Type** Scheduled

4.8/5 (11 ratings)
Language English | Credits 4
Free
LEARN MORE

## Introduction to Audio-Visual Media

Dr.K.S. Kusuma
Jamia Millia Islamia

Start Date: 17/08/2018 End Date: 30/11/2018 Enrollment End Date: 30/11/2018

253 TUTORIALS | 15 TEST | 4 ASSIGNMENTS

**60 Hours** Investment | Credit Certificate | **Type** Scheduled

4.5/5 (4 ratings)
Language English | Credits 4
Free
LEARN MORE

ClearAll

Categories Clear
- Arts and Recreation (1)
- Library and Information Science (1)

Language Clear
- English (2)

Learning Path Clear
- Undergraduate (2)

Course Rating Clear
- 4 Stars & above
- 3 Stars & above
- 2 Stars & above
- 1 Star & above

Universities Clear
- Jamia Millia Islamia (2)

Faculties Clear
- Dr.K.S. Kusuma (2)
- Gauhar Hayat (1)

Course Credit Clear
- Yes (2)

Scheduled Courses | Self-paced Courses

Course Filter: All
Sort By: Start date

2 Scheduled Courses found for "Advertising and..." Clear Search

## Advertising and Public Relations

Dr.K.S. Kusuma
Jamia Millia Islamia

Start Date: 04/08/2017 | End Date: 30/11/2017 | Enrollment End Date: 30/11/2017

266 TUTORIALS | 19 TEST | 2 ASSIGNMENTS

20 Hours Investment | Credit Certificate | Type Scheduled

4.7/5 (20 ratings)
Language English | Credits 4
Free
LEARN MORE

## Advertising and Public Relations

Dr.K.S. Kusuma
Jamia Millia Islamia

Start Date: 17/08/2018 | End Date: 07/12/2018 | Enrollment End Date: 30/11/2018

308 TUTORIALS | 16 TEST | 3 ASSIGNMENTS

60 Hours Investment | Credit Certificate | Type Scheduled

3.6/5 (9 ratings)
Language English | Credits 4
Free
LEARN MORE

जामिया मिल्लिया इस्लामिया
(केन्द्रीय विश्वविद्यालय)
मौलाना मोहम्मद अली जौहर मार्ग, नई दिल्ली–110025
JAMIA MILLIA ISLAMIA
(Central University)
Maulana Mohammad Ali Jauhar Marg, New Delhi-110025

दूरभाष : 26984075, 26988044
26981717, 26985176
फैक्स : 011-26980229
ई–मेल : registrar@jmi.ac.in
वेबसाइट: http://jmi.ac.in

कुलसचिव कार्यालय
Office of the Registrar

F.No. FBK/AJKMCRC/'18/

19/11/2018

## TO WHOM IT MAY CONCERN

This to certify that Prof. Farhat Basir Khan, was involved in the development for MOOCs Courses of AJKMCRC. He has given valuable in puts for NMEICT Project Phase-I & II e-Contents making for the subject Mass Communication & Journalism course (Under-graduate level) for the Consortium of Educational Communication broadcast on Vyas channel of CEC-UGC & SWAYAM Prabha DTH channel of MHRD.

He also participated in the MOOCs workshop organized at IT Bombay from 11th to 14th September, 2014.

- Prof. F B Khan (He was nominated as additional faculty for Photo Journalism course)

4. Attended 2-Days Workshop on Development & Delivery of MOOCs on SWAYAM Platform (23rd & 24th, July 2018) at AJKMCRC-J.M.I.

Prof. F. B. Khan has made a significant contribution to the team during his MOOCs running. I wish him the best in his future endeavours.

(A.P Siddiqui) *IPS*
Registrar

जामिया मिल्लिया इस्लामिया
(केन्द्रीय विश्वविद्यालय)
मौलाना मोहम्मद अली जौहर मार्ग, नई दिल्ली–110025

**JAMIA MILLIA ISLAMIA**
**(Central University)**
Maulana Mohammad Ali Jauhar Marg, New Delhi-110025

दूरभाष : 26984075, 26988044
26981717, 26985176
फैक्स : 011-26980229
ई–मेल : registrar@jmi.ac.in
वेबसाइट: http://jmi.ac.in

कुलसचिव कार्यालय

Office of the Registrar

F.No. FBK/AJKMCRC/'18/

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Prof. F. B. Khan has made a significant contribution to the team during his MOOCs running. I wish him the best in his future endeavours.

(A.P Siddiqui) *IPS*
Registrar

Secure | https://swayam.gov.in/courses/4337-photo-journalism

# PHOTO JOURNALISM

OVERVIEW

SYLLABUS

FACULTY

FAQS

PHOTO JOURNALISM

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 20/03/2018 | 30/05/2018 | 30/05/2018 |

No. of Enrollments
835 students

Download Course Syllabus
(PDF Format)

**Created by**

FB Khan
Jamia Millia Islamia

4.6
out of 5

Based on 15 ratings

| | |
|---|---|
| 5 star | 10 |
| 4 star | 4 |
| 3 star | 1 |
| 2 star | 0 |
| 1 star | 0 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | Arts and Recreation |
| **Learning Path** | Certificate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | To be announced |
| **Credits** | 4 |

| 192 | 11 | 8 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

## Overview

# COMPUTER APPLICATION FOR MASS MEDIA

OVERVIEW

SYLLABUS

FACULTY

FAQS

COMPUTER APPLICATION FOR MASS MEDIA

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 20/03/2018 | 30/05/2018 | 30/05/2018 |

No. of Enrollments
2662 students

Download Course Syllabus
(PDF Format)

**Created by**

F B Khan
Jamia Millia Islamia

4.6
out of 5

Based on 39 ratings

| | |
|---|---|
| 5 star | 28 |
| 4 star | 8 |
| 3 star | 3 |
| 2 star | 0 |
| 1 star | 0 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | Education |
| **Learning Path** | Certificate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | To be announced |
| **Credits** | 4 |

| 184 | 9 | 8 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

## Overview

# DESIGN AND GRAPHICS

DESIGN AND GRAPHICS

OVERVIEW

SYLLABUS

FACULTY

FAQS

DESIGN AND GRAPHICS

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 06/08/2018 | 30/11/2018 | 30/11/2018 |

No. of Enrollments
1573 students

Download Course Syllabus
(PDF Format)

**Created by**

F B Khan
Jamia Millia Islamia

4.4
out of 5

Based on 14 ratings

| | |
|---|---|
| 5 star | 9 |
| 4 star | 2 |
| 3 star | 2 |
| 2 star | 1 |
| 1 star | 0 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | General |
| **Learning Path** | Undergraduate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after accessing.... |
| **Exam Date** | 02/12/2018 |
| **Credits** | 4 |

| 193 | 25 | 2 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

## Overview

# WRITING FOR MASS MEDIA

WRITING FOR MASS MEDIA

OVERVIEW

SYLLABUS

FACULTY

FAQS

WRITING FOR MASS MEDIA

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 13/08/2018 | 10/12/2018 | 10/12/2018 |

No. of Enrollments
1089 students

Download Course Syllabus
(PDF Format)

**Created by**
F B Khan
Jamia Millia Islamia

4.3
out of 5

Based on 24 ratings

| | |
|---|---|
| 5 star | 13 |
| 4 star | 6 |
| 3 star | 4 |
| 2 star | 1 |
| 1 star | 0 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | General |
| **Learning Path** | Undergraduate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | To be announced |
| **Credits** | 4 |

| 190 | 29 | 2 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

## Overview

# INTRODUCTION TO MASS COMMUNICATION


- OVERVIEW
- SYLLABUS
- FACULTY
- FAQS

INTRODUCTION TO MASS COMMUNICATION

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 06/08/2018 | 30/11/2018 | 30/11/2018 |

No. of Enrollments
924 students

Download Course Syllabus
(PDF Format)

**Created by**

Farhat Basir Khan
Jamia Millia Islamia

4.4
out of 5

Based on 14 ratings

| | |
|---|---|
| 5 star | 10 |
| 4 star | 1 |
| 3 star | 2 |
| 2 star | 0 |
| 1 star | 1 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | General |
| **Learning Path** | Undergraduate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | 01/12/2018 |
| **Credits** | 4 |

| 217 | 26 | 2 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

**Overview**

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मौलाना मोहम्मद अली जौहर मार्ग, नई दिल्ली–110025
**JAMIA MILLIA ISLAMIA**
**(Central University)**
Maulana Mohammad Ali Jauhar Marg, New Delhi-110025

दूरभाष : 26984075, 26988044
26981717, 26985176
फैक्स : 011-26980229
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वेबसाइट: http://jmi.ac.in

कुलसचिव कार्यालय
Office of the Registrar

F.No. FBK/AJKMCRC/'18

19/11/2018

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He also participated in the MOOCs workshop organized at IT Bombay from 11th to 14th September, 2014.

- Prof. F B Khan (He was nominated as additional faculty for Photo Journalism course)

4. Attended 2-Days Workshop on Development & Delivery of MOOCs on SWAYAM Platform (23rd & 24th, July 2018) at AJKMCRC-J.M.I.

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← → × Secure | https://swayam.gov.in/courses/4337-photo-journalism

# PHOTO JOURNALISM

- OVERVIEW
- SYLLABUS
- FACULTY
- FAQS

PHOTO JOURNALISM

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 20/03/2018 | 30/05/2018 | 30/05/2018 |

No. of Enrollments
835 students

Download Course Syllabus
(PDF Format)

**Created by**

FB Khan
Jamia Millia Islamia

4.6
out of 5

Based on 15 ratings

| | |
|---|---|
| 5 star | 10 |
| 4 star | 4 |
| 3 star | 1 |
| 2 star | 0 |
| 1 star | 0 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | Arts and Recreation |
| **Learning Path** | Certificate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | To be announced |
| **Credits** | 4 |

| 192 | 11 | 8 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

## Overview

Secure | https://swayam.gov.in/courses/4336-computer-application-for-mass-media

# COMPUTER APPLICATION FOR MASS MEDIA

OVERVIEW

SYLLABUS

FACULTY

FAQS

COMPUTER APPLICATION FOR MASS MEDIA

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 20/03/2018 | 30/05/2018 | 30/05/2018 |

No. of Enrollments
2662 students

Download Course Syllabus
(PDF Format)

**Created by**

F B Khan
Jamia Millia Islamia

4.6
out of 5

Based on 39 ratings

| | |
|---|---|
| 5 star | 28 |
| 4 star | 8 |
| 3 star | 3 |
| 2 star | 0 |
| 1 star | 0 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | Education |
| **Learning Path** | Certificate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | To be announced |
| **Credits** | 4 |

| 184 | 9 | 8 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

**Overview**

# DESIGN AND GRAPHICS


- OVERVIEW
- SYLLABUS
- FACULTY
- FAQS

DESIGN AND GRAPHICS

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 06/08/2018 | 30/11/2018 | 30/11/2018 |

No. of Enrollments
1573 students

Download Course Syllabus
(PDF Format)

**Created by**

F B Khan
Jamia Millia Islamia

| Course Language | English |
|---|---|
| Course Type | Scheduled |
| Video transcripts | English |
| Course Category | General |
| Learning Path | Undergraduate |
| Course Length | 60 Hours |
| Weekly time commitments | 6 Hours |
| Course Completion | Yes, after accessing.... |
| Exam Date | 02/12/2018 |
| Credits | 4 |

4.4
out of 5

Based on 14 ratings

| | |
|---|---|
| 5 star | 9 |
| 4 star | 2 |
| 3 star | 2 |
| 2 star | 1 |
| 1 star | 0 |

| 193 | 25 | 2 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

**Overview**

# WRITING FOR MASS MEDIA


OVERVIEW

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FACULTY

FAQS

WRITING FOR MASS MEDIA

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 13/08/2018 | 10/12/2018 | 10/12/2018 |

No. of Enrollments
1089 students

Download Course Syllabus
(PDF Format)

**Created by**

F B Khan
Jamia Millia Islamia

4.3
out of 5

Based on 24 ratings

| | |
|---|---|
| 5 star | 13 |
| 4 star | 6 |
| 3 star | 4 |
| 2 star | 1 |
| 1 star | 0 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | General |
| **Learning Path** | Undergraduate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | To be announced |
| **Credits** | 4 |

| 190 | 29 | 2 | 0 | 0 |
|---|---|---|---|---|
| Tutorials | Tests | Assignments | Article | Weekly Reading list |

Overview

# INTRODUCTION TO MASS COMMUNICATION


OVERVIEW

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FACULTY

FAQS

INTRODUCTION TO MASS COMMUNICATION

ENROLL NOW

| Start Date | End Date | Enrollment End Date |
|---|---|---|
| 06/08/2018 | 30/11/2018 | 30/11/2018 |

No. of Enrollments
924 students

Download Course Syllabus
(PDF Format)

**Created by**

Farhat Basir Khan
Jamia Millia Islamia

4.4
out of 5

Based on 14 ratings

| | |
|---|---|
| 5 star | 10 |
| 4 star | 1 |
| 3 star | 2 |
| 2 star | 0 |
| 1 star | 1 |

| | |
|---|---|
| **Course Language** | English |
| **Course Type** | Scheduled |
| **Video transcripts** | English |
| **Course Category** | General |
| **Learning Path** | Undergraduate |
| **Course Length** | 60 Hours |
| **Weekly time commitments** | 6 Hours |
| **Course Completion** | Yes, after passing a.... |
| **Exam Date** | 01/12/2018 |
| **Credits** | 4 |

| 217 | 26 | 2 | 0 | 0 |
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