Sub: ENGINEERING ECONOMICS AND ACCOUNTANCY [14ME506/A]

Scheme of valuation cum Solution set

1 X 12 = 12 M

- a) Wealth is defined as "stock of goods existing at a given time that have money value".
- b) Consumption refers to the use of resources to satisfy current needs and wants.
- c) Law of demand there is an inverse relationship between price and quantity demanded.
- d) Forms of Business organization:
 - [1] Single trader
 - [2] Partnership
 - [3] Public Limited Company
- e) Costing relates to the determination of cost of a product manufactured or service rendered.
- f) The direct form of cost incurred to produce a product or deliver a service is called Direct Cost.
- g) Break-even analysis is used to determine when your business will be able to cover all its expenses and begin to make a profit.
- h) Straight line method of depreciation: "A fixed asset is depreciated by an equal amount per year".

$$D = \frac{C - S}{N}$$

- i) The break-even analysis is based on certain assumptions.
 - All costs can be separated into fixed and variable components,
 - > Fixed costs will remain constant at all volumes of output.
- Account is book-keeping or recording the business transactions in the books of original entry and the ledgers.
- k) Journal means a 'day Book' in which day-to-day business transactions are recorded in chronological order.
- Balance sheet is prepared as a statement to set out the assets and liabilities of a business firm and which serves to ascertain the financial position of the same on any particular date.

UNIT-I

2. Human wants:

All desires, tastes and motives of human beings are called wants in economics.

In Economics, wants are classified into three categories, viz,

- Necessaries,
- Comforts and
- Luxuries

Necessaries: 4M

Necessaries are those which are essential for living.

Man requires certain basic things to live. He wants food, clothing and shelter. Without these things, life is impossible.

Necessaries can further be classified as,

- Necessaries of Existence: Without which we cannot exist e.g. food.
- Necessaries of Efficiency: some goods may not be necessary to live, but necessary to make us efficient worker. E.g. table & chair are necessary for better writing

Comforts: 4M

- Having satisfies our wants for the necessaries of life, we desire to have some comforts too.
- Comforts refer to those goods and services, which are not essential for living but which are required for a happy living.
- For a student, a book, a table and a chair are necessary; but cushioned chair is comfort.
- A TV, a sofa-cum-bed, a cushioned revolving chair may be stated under 'comforts'.
- Eating superior varieties of food may also add to the happiness of the consumer.
- Example: eating fruits, drinking milk etc.
- Comforts promote efficiency also.

Luxuries: 4M

- Man does not stop even at comforts. After comforts have been provided, he wants luxuries too.
- Luxury is defined as a superfluous (additional) consumption, something we could easily do without.
- These goods are used to show off one's higher status in life
- e.g. Luxuries car; jewellery; silk cloth; washing machine; diamond studded jewels are luxuries.

(a) Determinants of Demand (with explanation)

6M

- 1. Nature of product
- 2. Time frame
- 3. Degree of postponement
- 4. Number of alternative uses
- 5. Tastes and preferences of the consumer
- 6. Availability of close substitutes
- 7. Joint goods
- 8. Level of prices
- 9. Availability of subsidies
- 10. Expectation of prices
- 11. Durability of the product
- 12. Government policy

3(b)

"Elasticity of demand is defined as the responsiveness of the quantity demanded of a good to changes in one of the variables on which demand depends."

- These variables are price of the commodity, prices of the related commodities, income of the consumer & other various factors on which demand depends.
- Thus, we have Price Elasticity, Cross Elasticity, Elasticity of Substitution & Income
 Elasticity. It is always price elasticity of demand which is referred to as elasticity of
 demand

 3M

Price Elasticity

 Measures how much the quantity demanded of a good changes when its price changes.

Or

It may be defined as "Percentage Change in Quantity demanded over percentage change in price"

3M

UNIT-II

4.

Single Trader: 4M

It is a one-man form of organization wherein the trader assumes all the risk of ownership carrying out the business with his own capital, skill and intelligence.

He is the boss for himself. He has total operational freedom. He is the owner, Manager and controller. He has total freedom and flexibility.

Full control lies with him. He can take his own decisions. He can choose or drop a particular product or business based on its merits. He need not discuss this with anybody. He is responsible for himself.

Examples: Restaurants, Supermarkets, pan shops, medical shops, hosiery shops etc.

Advantages of the of the single trader form of business organization:

- 1. <u>Easy to start and easy to close</u>: Formation of a sole trader form of organization is relatively easy and even closing the business is easy.
- 2. <u>Personal contact with customers directly:</u> Based on the tastes and preferences of the customers the stocks can be maintained.
- 3. **Prompt decision-making:** To improve the quality of services to the customers, he can take any decision and implement the same promptly. He is the boss and he is responsible for his business decisions relating to growth or expansion.
- 4. <u>High degree of flexibility:</u> Based on the profitability, the trader can decide to continue or change the business, if needed.
- 5. Secrecy: Business secrets can well be maintained because there is only one trader.
- 6. Low rate of taxation: The rate of income tax for sole traders is relatively very low.
- 7. <u>Direct motivation:</u> If there are profits, all the profits belong to the trader himself. In other words. If he works more hard, he will get more profits. This is the direct motivating factor. At the same time, if he does not take active interest, he may stand to lose badly also.
- 8. <u>Total Control:</u> The ownership, management and control are in the hands of the sole trader and hence it is easy to maintain the hold on business.
- 9. <u>Minimum interference from government:</u> Except in matters relating to public interest, government does not interfere in the business matters of the sole trader. The sole trader is free to fix price for his products/services if he enjoys monopoly market.

10. <u>Transferability:</u> The legal heirs of the sole trader may take the possession of the business.

Disadvantages of the of the single trader form of business organization:

4M

- 1. <u>Unlimited liability:</u> The liability of the sole trader is unlimited. It means that the sole trader has to bring his personal property to clear off the loans of his business. From the legal point of view, he is not different from his business.
- 2. <u>Limited amounts of capital:</u> The resources a sole trader can mobilize cannot be very large and hence this naturally sets a limit for the scale of operations.
- 3. <u>No division of labour:</u> All the work related to different functions such as marketing, production, finance, labour and so on has to be taken care of by the sole trader himself. There is nobody else to take his burden. Family members and relatives cannot show as much interest as the trader takes.
- 4. <u>Uncertainty:</u> There is no continuity in the duration of the business. On the death, insanity of insolvency the business may be come to an end.
- 5. <u>Inadequate for growth and expansion:</u> This from is suitable for only small size, one-man-show type of organizations. This may not really work out for growing and expanding organizations.
- 6. <u>Lack of specialization</u>: The services of specialists such as accountants, market researchers, consultants and so on, are not within the reach of most of the sole traders.
- 7. <u>More competition:</u> Because it is easy to set up a small business, there is a high degree of competition among the small businessmen and a few who are good in taking care of customer requirements along can service.
- 8. <u>Low bargaining power:</u> The sole trader is the in the receiving end in terms of loans or supply of raw materials. He may have to compromise many times regarding the terms and conditions of purchase of materials or borrowing loans from the finance houses or banks.

5.

(a) Methods of distribution of overhead costs (with explanation)

- 1. Percentage of direct labour cost
- 2. Percentage of direct material cost
- 3. Prime cost percentage rate
- 4. Labour hour rate
- 5. Machine hour rate
- 6. Production unit method

UNIT COSTING: 3M

Unit or output costing is used in those industries or organization where standard products are produced from a common process and all the units produced are more or less similar to each other. This method is also known as single costing method.

Unit costing is used in those industries, where following characteristics are found-

- 1. Production should be uniform or homogeneous and a continuous affair
- 2. The units of production should be identical
- 3. The cost units should be physical and natural
- 4. Per unit cost has to be determined, for example per ton, per meter, per kg, etc.

Elements of cost under unit costing:

In Unit costing or output costing, in order to determine total cost and per unit cost, collection of various elements of cost is done as follows,

Material – the quantity and value of material consumed is determined by preparing a Material Abstract. The materials which are issued from stock are valued on an appropriate basis.

Labour – As required. Wages Analysis Sheet is prepared so that direct and indirect labour cost can be determined.

Direct Expenses – In addition to material and labour, there are certain other expenses incurred which are termed as direct expenses.

Overheads – the overheads are debited to production for the period for which the cost is being determined. These overheads expenses are taken from the financial records. There are certain expenses which cannot be determined before the end of the accounting period.

JOB COSTING: 3M

Job costing is suitable where work is undertaken to customer's special requirement and each order is of comparatively short duration.

Job costing relates to the process of tracking the operating cost that have received during a job against the income produced by that job.

It is an important tool for those who are pairing a relatively high rupee volume per customer with a relatively low number of Customers.

Examples of Job Costing:

- Machine-tool manufacturing
- Foundries

- Printing
- Furniture-makers
- Repair-shops
- Garages

UNIT-III

6.

(a) Advantages of Break-Even Analysis

6M

- (i) It helps in the determination of selling price which will give the desired profits.
- (ii) It helps in the fixation of sales volume to cover a given return on capital employed.
- (iii) It helps in forecasting costs and profit as a result of change in volume.
- (iv) It gives suggestions for shift in sales mix.
- (v) It helps in making inter-firm comparison of profitability.
- (vi) It helps in determination of costs and revenue at various levels of output.
- (vii) It is an aid in management decision-making (e.g., make or buy, introducing a product etc.), forecasting, long-term planning and maintaining profitability.
- (viii) It reveals business strength and profit earning capacity of a concern without much difficulty and effort.

6 (b)

v.c(per unit) = 30000/15000 = Rs. 2/-

BEP (Qty)= F/(S-V)

2M

= 20000/(8-2)

= 3333.33 units

2M

BEP (Value) = 3333.33 x 8

= Rs 26,666.64

7. (a)

C = Rs 530000+10000

= Rs 5,40,000/-

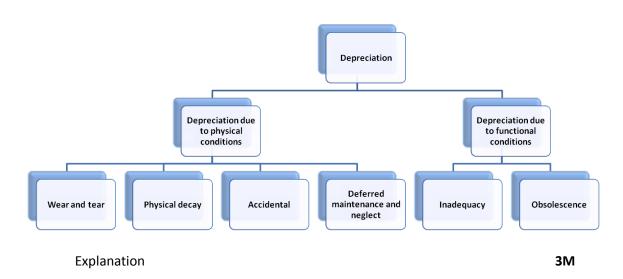
N = 10 years

Annual Depreciation = (C - S)/N

= (540000 - 20000)/10

= **Rs 52,000/-** per year **2M**

(b) Causes of Depreciation 3M



UNIT-IV

The final accounts of a firm can be divided into two stages.

The first stage is preparing the trading and profit and loss account and the second stage is preparing the balance sheet.

The main purpose of preparing the trading account is to ascertain gross profit or gross loss as a result of buying and selling the goods.

Trading account reveals Gross Profit or Gross Loss. Gross Profit is transferred to credit side of Profit and Loss A/c. Gross Loss is transferred to debit side of the Profit Loss Account.

Thus Profit and Loss A/c is commenced. This Profit & Loss A/c reveals Net Profit or Net loss at a given time of accounting year.

The second point of final accounts is the preparation of balance sheet. It is prepared after the trading and profit, loss accounts have been compiled and closed.

A balance sheet may be considered as a statement of the financial position of the concern at a given date.

Thus, Balance sheet is defined as a statement which sets out the assets and liabilities of a business firm and which serves to ascertain the financial position of the same on any particular date.

On the left-hand side of this statement, the liabilities and the capital are shown. On the right-hand side all the assets are shown. Therefore, the two sides of the balance sheet should be equal. Otherwise, there is an error somewhere.

4M

8 (b) (In the books of Prakash)

Journal

Date	Particulars		L.F	Debit (Rs.)	Credit (Rs.)
2015	Cash A/c	Dr.		40,000	
Apr. 1	To Ravi's A/c	Cr.			40,000
	(Being the cash received from Ravi))			
Apr. 2	Purchase A/c	Dr.		15,000	
	To Siva A/c	Cr.			15,000
	(Being the goods purchased from Siva)				
Apr. 3	Kumar's A/c	Dr.		25,000	
	To Sales A/c	Cr.			25,000
	(Being the goods sold to kumar)				
Apr. 4	Goods A/c	Dr.		500	
	To Kumar's A/c	Cr.			500
	(Returned goods from kumar)				
Apr. 5	Furniture A/c	Dr.		10,000	
	To Manikyam's A/c	Cr.			10,000
	(Being the commission received)				
				90,500	90,500

Individual ledgers 2N

Particulars	Debit Amount (Rs)	Particulars	Credit Amount (Rs)
Stock (1.1.2008.)	3,000	Sales	11,060
Purchas open	8,990	Less: Return Inwards	(30)
Gross Profit	840	Stock (close)	1,800
	12,830		12,830

P&L Account for the year ended March 31, 2014

Particular s	Debit Amount (Rs)	Particulars	Credit Amount (Rs)
	1	Gross Profit	840
	'	Discount received	445
Rates, taxes & Insurance	190	Net Loss	470
Lighting & Heating	65		
Salaries	1,075		
Printing	225		
Discount allowed	200		
	1		
	1755		1755

Particulars	Credit Amount (Rs)	Particulars	Debit Amount (Rs)
Reserves & Capital	(K3)	Fixed Assets	(Ks)
Capital	7610	Fixtures & Fittings	225
Net Loss (-)	470		
Liabilities		Freehold premises	1,500
Creditors	1950	Current Assets	
Bills Payable	1,875	Cash in hand	30
	· · · · · · · · · · · · · · · · · · ·	Cash at bank	885
		Bills receivable	825
		Debtors	5,700
		Stock	1,800
	10,965		10,965

****THE END****

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