Paper – 10: Cost & Management Accountancy

Time Allowed: 3 Hours **Full Marks: 100**

This paper contains 4 questions. All questions are compulsory, subject to instruction provided against each question. All workings must form part of your answer. Assumptions, if any, must be clearly indicated.

1. **Answer all questions** **[2x10=20]**

(a) State Equivalent Unit.

Answer:

Equivalent production represents the production of a process in terms of completed units. i.e. it means converting the incomplete units into its equivalent units (notionally completed units). E.g. 100 units 60% complete means 60 units 100% complete. This method is used when costs are being apportioned between WIP and the completed units. In each process an estimate is made of the percentage completion of WIP and equivalent production of WIP is found by the following formula:

Equivalent units of WIP = Actual number of units in WIP x Percentage of work completed.

Hence, equivalent production = 2,000 units x 25% = 500 units

(b) ANKIT LTD. operates a throughput accounting system. The details of product B-1 per unit are as under:

Selling Price	**₹30**
Material Cost	**₹12**
Conversion Cost	**₹15**

Time on bottleneck resources 6 minutes

Calculate the Return per hour for Product B-1

Answer:

$$\text{Return per hour for Product B-1} = \frac{\text{Selling Price - Material Cost}}{\text{Time of bottleneck resuorce}}$$

$$= \frac{30-12}{6\,\text{minutes}} \times 60\,\text{minutes}$$

$$= \frac{18}{6} \times 60 = ₹\,180$$

(c) A firm engaged in the profession of rendering software services provides three different kinds of services to its clients. The following are relating to these services:

Types of services	**A**	**B**	**C**
	₹/Job	**₹/Job**	**₹/Job**
Annual fee	**3,000**	**2,400**	**1,800**
Annual variable cost	**1,350**	**800**	**810**
Annual fixed costs	**600**	**320**	**225**

The total annual fixed costs are budgeted at ₹5,74,200 and none of these costs are specific to any type of service provided by the firm.

The firm has estimated the number of service contracts to be sold in the next year in the proportion of 20%, 30% and 50% respectively for the three types of services namely A, B and C.

What will be the break-even of the firm?

Answer:

Service Type	A	B	C
	₹/Job	**₹/Job**	**₹/Job**
Annual fee	3,000	2,400	1,800
Annual Variable cost	1,350	800	810
Contribution	1,650	1,600	990
Proportion of Services	2	3	5
Contribution per set of three services	3,300	4,800	4,950

Total of contribution for a set= ₹(3,300+4,800+4,950)= ₹13,050
No. of sets to breakeven= F/C= ₹5,74,200/₹13,050= 44
Annual fee for a set of services= ₹3,000x2+₹2,400x3+₹1,800x5=₹22,200
Breakeven sales= 44x₹22,200= ₹9,76,800.

(d) The standard set of material consumption was 100kg. @ ₹2.25 per kg.
In a cost period:
Opening stock was 100kg.@ ₹2.25 per kg.
Purchase made 500kg. @₹2.15 per kg.
Consumption 110 kg.
Calculate usage variance and price variance.

Answer:

Computation of Material usage variance

Material usage variance= SQSP-AQSP
= SP (SQ-AQ)
=2.25(100-110)
22.50 (A)

Computation of Price Variance:

Material Price Variance= AQSP-AQAP
= (110x2.25)-(110x2.15)
= 11(F)

(e) The following information relates to budgeted operations of Division A of a manufacturing Company.

Particulars	Amount in ₹
Sales-50,000 units @₹8	**4,00,000**
Less: Variable costs @₹6 per unit	**3,00,000**
Contribution margin	**1,00,000**
Less: Fixed Costs	**75,000**
Divisional Profits	**25,000**

The amount of divisional investment is ₹1,50,000 and the minimum desired rate of return on the investment is the cost of capital of 10%.
Calculate

I. Divisional expected ROI and
II. Divisional expected RI

Answer:

I. ROI= ₹25,000/1,50,000x100=16.7%
II. RI = Divisional profit- Minimum desired rate of return
= 25,000-10% of 1,50,000=₹10,000

(f) How will you treat Cenvat availed as credit on purchased raw materials in the Cost Accounting Records?

Answer.

Cenvat credit to be deducted from the cost of raw materials, and only the net value should be taken in the priced stores ledger, which forms the basis for pricing materials issues to cost centres.

(g) A company manufactures various types of the product. As a Cost Auditor would you accept the absorption of "Selling and Distribution" expenses as a percentage on Sales Values?

Answer:

The method of absorption of Selling and Distribution Overheads as a percentage of sales value is not correct because:

- Some quantities of product have been consumed captively.
- Separate seminars or advertisement expenses incurred for various type of products
- Freight cost is different for different type of product
- Product has different demand in different areas and their selling expenses cannot be pooled as common.

(h) What are the essential conditions to obtain the equilibrium position of the industry under perfect competition?

Answer:

In order to obtain the equilibrium position of the industry under perfect competition the following conditions are essential.

- The industry gets an equilibrium position where MC=MR.
- All firms in the industry get only normal profits.
- At equilibrium point the Mc, AC, MR and AR are equal.
- Number of the firms is constant.
- Possible only in long period.

(i) The Revenue function of a firm given by $R = (1{,}800 - 3x)\frac{x}{2}$**, find the firm's marginal revenue function.**

Answer:

$$R = (1{,}800 - 3x)\frac{x}{2} = \frac{1{,}800x}{2} - \frac{3}{2}x^2$$

$$MR = \frac{dR}{dx} = \frac{1{,}800}{2} - \frac{3}{2} \times 2x$$

$$= 900 - 3x$$

(j) State Average Fixed Cost.

Answer:

Average fixed cost is obtained by dividing the total fixed cost of the firm by its output.

Average Fixed Cost (AFC) = $\frac{\text{Total Fixed Cost (TFC)}}{\text{Output (Q)}}$

The fixed costs of a firm are, by definition, constant when output is changed. Therefore, the burden of fixed cost per unit of output will continue to fall as output is increased. Thus, with increasing output the average fixed cost will continue to fall.

2. Answer any two questions. [2x20=40]

(a)

(i) A Club runs a library for its members. As part of club policy, an annual subsidy of up to ₹ 5 per member including cost of books may be given from the general funds of the club. The management of the club has provided the following figures for its library department.

Number of Club members	**5,000**
Number of Library members	**1,000**
Library fee per member per month	**₹100**
Fine for late return of books	**₹ 1 per book per day**
Average No. of books returned late per month	**500**
Average No. of days each book is returned late	**5 days**
Number of available old books	**50,000 books**
Cost of new books	**₹ 300 per book**
Number of books purchased per year	**1,200 books**
Cost of maintenance per old book per year	**₹10**

Staff details	**No.**	**Per Employee**
		Salary per month (₹)
Librarian	**01**	**10,000**
Assistant Librarian	**03**	**7,000**
Clerk	**01**	**4,000**

You are required to calculate:

I. The cost of maintaining the library per year excluding the cost of new books;

II. The cost incurred per member per month on the library excluding cost of new books; and

III. The net income from the library per year.

If the club follows a policy that all new books must be purchased out of library revenue, what is the maximum number of books that can be purchased per year and how many excess books are being purchased by the library per year?

Also, comment on the subsidy policy of the club. [2+2+2+2+2=10]

Answer.

I. Computation of total revenue

No. of library members	No	1,000
Library fees per month	₹	1,00,000
Late fees per month (500 × 5 × 1)	₹	2,500
Total Revenue per month	₹	1,02,500
Total Revenue per annum (1,02,500 × 12)	₹	12,30,000

Computation of total cost

Staff details	**No.**	**Salary per month**	**Total cost**
		₹	₹
Librarian	1	10,000	10,000
Assistant Librarian	3	7,000	21,000
Clerk	1	4,000	4,000
Total Staff cost per month			35,000
Total Staff cost per year (35,000 × 12)			4,20,000
	No.	**Cost per book**	
Books maintenance cost	50,000	₹ 10	5,00,000
Total maintenance cost per annum excluding cost of new books (4,20,000 + 5,00,000)			9,20,000

II. Cost incurred per library member per annum (₹ 9,20,000/1,000)	₹	920
Cost incurred per member per month on the library excluding cost of new books (920/12)	₹	76.67
Cost incurred per club member per annum (9,20,000/5,000)	₹	184
Cost incurred per club member per month (184/12)	₹	15.33
III. **Net income from the library per annum** (12,30,000 – 9,20,000)	₹	3,10,000
Cost per new book	₹	300
Maximum number of new books per annum (3,10,000/300)	No.	1033.333
Present number of books purchased	No.	1200
Excess books purchased (1200 – 1033.333)	No.	166.6667
Subsidy being given per annum	₹	50,000
Subsidy per library member per annum (50,000/1,000)	₹	50
Subsidy per club member per annum (50,000/5,000)	₹	10

Comment:

The club is exceeding its subsidy target to members by ₹45 (₹50 – 5) per library member and ₹5 (₹10 – 5) per club member.

(ii) Raj Ltd produces and sells a single budget. Sales budget for calendar year 2013 by quarters is as under:

Quarters	I	II	III	IV
No. of units to be sold	**20,000**	**22,000**	**25,000**	**27,000**

The year is expected to open with an inventory of 6,000 units of finished products and close with inventory of 8,000 units. Production is customarily scheduled to provide for 70% of the current quarter's sales demand plus 30% of the following quarter demand. The budgeted selling price per unit is ₹ 40.

The standard cost details for one unit of the product are as follows:

Variable Cost ₹ 34.50 per unit.

Fixed Overheads 2 hours 30 minutes @ ₹ 2 per hour based on a bused on a budgeted production volume of 1,10,000 direct labour hours for the year. Fixed overheads are evenly distributed through-out the year.

You are required to:

I. Prepare Quarterly Production Budget for the year.

II. Calculate the break-even point. **[4+2]**

Answer:

I. Quarterly Production Budget for 2013

Particulars	Q-I	Q-II	Q-III	Q-IV	Total

70% of current quarter sales demand (units)	14,000	15,400	17,500	18,900	65,800
30% of the following quarter (units)	6,600	7,500	8,100	8,000	30,200
	20,600	22,900	25,600	26,900 (note#1)	96,000

Working Note # 1 : Production in Q-IV

Production for the year = Sales + Closing Stock - Opening Stock

= (20,000 + 22,000 +25,000 + 27,000) + 8000 - 6,000 = 96,000 units

∴ Production for Q-IV (units) = Total production for the year - production for first 3 quarters

= 96,000 - (20,600 + 22,900 + 25,600)

= 26,900 units

Production Cost

Particulars	**Q-I**	**Q-II**	**Q-III**	**Q-IV**	**Total**
Units to be produced	**20,600**	**22,900**	**25,600**	**26,900**	**96,000**
	(₹)	(₹)	(₹)	(₹)	(₹)
Variable Cost @ ₹ 34.50 pu	7,10,700	7,90,050	8,83,200	9,28,050	33,12,000
Fixed Overhead [Note # 2]	55,000	55,000	55,000	55,000	2,20,000
	7,65,700	8,45,050	9,38,200	9,83,050	35,32,000

Working Note # 2: Fixed Overhead

Fixed overhead = 1,10,000 hrs x ₹ 2 per hr = ₹ 2,20,000

∴ Fixed overhead per quarter $= \frac{₹2,20,000}{4}$ = ₹ 55,000

II. Break-even sales quantity = Fixed Cost ÷ Contribution per unit

$= \frac{₹2,20,000}{₹(40 - 34.50)\text{ per unit}}$ = ₹ 40,000 units

(iii) Enumerate the factors which cause difference in profits as shown in Financial Accounts and Cost Accounts. [4]

Answer:

Need for reconciliation:

When cost and financial accounts are kept separately, profit shown by one set of books may not agree with that of the other set. Hence, it is imperative that these two figures of profits be reconciled. If this reconciliation is not done, cost accounts would be unreliable. It may further be noted that reconciliation is possible only if both the sets contain sufficient details so as to enable the detection of causes of differences. Reasons for disagreement of Profits as per financial accounts and Cost accounts:

- There are certain items which appear in financial books only and are not recorded in cost accounting books. E.g.
  - Appropriation of profits
    - Income tax and Super tax
    - Transfer to General Reserve or any other fund of accumulated profits like dividend equalization reserve.
    - Dividends paid
    - Additional provisions for depreciation of buildings, plants, etc. Additional provisions for bad debts.
    - Amounts written off on goodwill, preliminary expenses, underwriting commission, debenture discount, etc.

- Appropriation to sinking funds.
- Capital expenditure specifically charged to revenue.

➢ Matters of pure finance
- Interest received on bank deposits
- Interest, dividends etc. received on investments
- Rents receivable
- Profit or Loss on sale of investments or fixed assets
- Expenses on stamp duty
- Interest on bank loan
- Transfer fee received
- Expenses of the company's share transfer office
- Damages and penalties payable at law
- Loss on scrapping of machine

- There may be some items which appear in cost accounts only and do not find a place in the financial books. E.g.
  - ➢ Notional rent on own premises used for production
  - ➢ Notional interest on capital employed in business
  - ➢ Notional salary to the owner
- In cost accounts, overheads are generally absorbed on the basis of a pre-determined overhead rate, whereas in financial accounts actual expenditure on overheads is recorded, this will also cause a difference between the figures of profit shown under financial and cost accounts.
- Different methods of valuation of closing stock adopted in cost and financial accounts will also cause a difference in the results shown by the two sets of books. In financial accounts the method generally followed is cost or net realizable value, whichever is less whereas in cost accounts different methods of pricing of material issues such as LIFO, FIFO, average etc are used.
- Use of different methods of depreciation is also responsible for the variation of profit shown by two sets of books. In financial accounts, depreciation may be charged according to written down value method whereas in cost accounts it may be charged on the basis of the life of the machine.
- Abnormal items not included in cost accounts also cause a difference in profit. If such items of expenses are included, cost ascertained will not be correct.

(b)

(i) GREEN ENVIRON LTD. has two divisions—M and N. Division-M manufactures product A-15 which it sells in outside market as well as to Division-N which processes it to manufacture Z-25. The Manager of Division-N has expressed the opinion that transfer price is too high. The two Divisional Managers are about to enter into discussions to resolve the conflict and Manager of Division-M to supply him with some information prior to discussions.

Division-M has been selling 50,000 units to outsiders and 10,000 units to Division-N, all at ₹25 per unit. It is not anticipated that these demand will change. The variable cost is ₹15 per unit and the fixed costs are ₹3 lakhs. Divisional investment in assets is ₹12 lakhs.

The Manager of Division-M anticipates that Division-N will want a transfer price of ₹22. If he does not sell to Division-N, ₹40,000 of fixed costs and ₹2,00,000 of assets can be avoided. The Manager of Division-M would have no control over the proceeds from the sale of the assets and is judged primarily on his rate of return.

Required:

I. Should the Manager of Division-M transfer its products at ₹22 to Division-N?

II. What is the lowest price that the Division-M should accept? [7+2=9]

Answer:

GREEN ENVIRON LTD

I. Comparative Profitability Statement of Division M (Figures in ₹)

	Alternative Situations		
Particulars	**Sell ₹25**	**Transfer at ₹22**	**Don't transfer**
Sales Revenue: Market sales (50,000 units × ₹25)	12,50,000	12,50,000	12,50,000
Transfer to Division – N (10,000 units × ₹25)	2,50,000	2,20,000	-----
Total (A)	15,00,000	14,70,000	12,50,000
Variable Cost (at ₹15/ unit)	9,00,000	9,00,000	7,50,000
Fixed Cost	3,00,000	3,00,000	2,60,000
Total (B) (₹)	12,00,000	12,00,000	10,10,000
Total Profit (A – B)	3,00,000	2,70,000	2,40,000
Total Assets (₹)	12,00,000	12,00,000	10,00,000
ROI (Percentage)	25%	22.50%	24%

Comments:

The manager of Division M should not agree to sell at ₹22 per unit, as it lowers down its rate of return (ROI) i.e. (25% to 22.50%

II. The lowest transfer price acceptable to Division M is one, which maintains its rate of return of 24% (ROI without selling to Division N):
= (Total sales Revenue -Total Cost) / Total Assets = 0.24
or, [(₹12,50,000 + 10,000 x Transfer Price (TP)) –12,00,000] ÷₹12,00,000= 0.24
or, 10,000 TP = 2,88,000 –50,000 = 2,38,000
or, (Transfer Price) TP = 2,38,000 ÷ 10,000 = 23.80 i.e. ₹23.80
The lowest transfer price acceptable to Division -M is ₹23.80 per unit.

(ii) What are the steps that need to be undertaken for making reporting of variances more effective? Name some variance reporting ratios. [5+1]

Answer:

In order that variance reporting should be effective, it is essential that the following requisites are fulfilled:

- The variances arising out of each factor should be correctly segregated. If part of a variance due to one factor is wrongly attributed to or merged with that of another, the analysis report submitted to the management would be misleading and wrong conclusions may be drawn from it.
- Variances, particularly the controllable variances should be reported with promptness as soon as they occur. Mere operation of Standard Costing and reporting of variances is of no avail. The success of a Standard Costing system depends on the extent of responsibility which the management assumes in correcting the conditions which cause variances from standard. In order to assist the management in assuming this responsibility, the variances should be reported frequently and on time. This would enable corrective action being taken for future production while work is in progress and before the project or job is completed.
- For effective control, the line of organization should be properly defined and the authority and responsibility of each individual should be laid down in clear terms. This will avoid 'passing on the buck' and shirking of responsibility and will enable the tracing of the causes of variances to the appropriate levels of management.
- In certain cases, a particular variance may be the joint responsibility of more than one individual or department. It is obvious that if corrective action has to be effective in such cases, it should be taken jointly.

- Analysis of uncontrollable variances should be made with the same care as for controllable variances. Though a particular variance may not be controllable at the lower level of management, a detailed analysis of the off-standard situation may reveal far reaching effects on the economy of the concern. This should compel the top management to take corrective action, say, by changing the policy which gave rise to the uncontrollable variance.

A number of ratios are used for reporting to the management the effective use of capacity, material, labour and other resources of a concern. Some of them are named below:

- Efficiency Ratio.
- Activity Ratio.
- Calendar Ratio.
- Capacity Usage Ratio
- Capacity Utilization Ratio.
- Idle Time Ratio

(iii) Pass the Journal entries for the following transactions in a double entry cost accounting system:

Particulars	**₹**
Issue of material:	
Direct	**55,000**
Indirect	**15,000**
Allocation of wages and salaries:	
Direct	**20,000**
Indirect	**4,000**
Overheads absorbed in jobs:	
Factory	**15,000**
Administration	**5,000**
Selling	**3,000**
Under/Over absorbed overheads:	
Factory (Over)	**2,000**
Admn. (Under)	**1,000**

[5]

Answer:

Journals

		Dr.	Cr.
Particulars		₹	₹
Work in progress Control A/c Factory Overhead Control A/c To Material Control A/c	Dr. Dr.	55,000 15,000	 70,000
Work in progress Control A/c Factory Overhead Control A/c To Wages Control A/c	Dr. Dr.	20,000 4,000	 24,000
Work in progress Control A/c Finished goods Control A/c Cost of Sales A/c To Factory Overhead Control A/c To Administration Overhead Control A/c To Selling Overhead Control A/c	Dr. Dr. Dr.	15,000 5,000 3,000	 15,000 5,000 3,000
Costing Profit & Loss A/c	Dr.	1,000	

To Administrative Overhead Control A/c			1,000
Factory Overhead Control A/c To Costing Profit & Loss A/c	Dr.	2,000	 2,000

(c)
(i) Relevant data relating to a Company are:

	Products			
	A	**B**	**C**	**Total**
Production and sales (Units)	**60,000**	**40,000**	**16,000**	
Raw material usage in units	**10**	**10**	**22**	
Raw material costs (₹)	**45**	**40**	**22**	**24,76,000**
Direct labour hours	**2.5**	**4**	**2**	**3,42,000**
Machine hours	**2.5**	**2**	**4**	**2,94,000**
Direct Labour Costs (₹)	**16**	**24**	**12**	
No. of production runs	**6**	**14**	**40**	**60**
No. of deliveries	**18**	**6**	**40**	**64**
No. of receipts	**60**	**140**	**880**	**1,080**
No. of production orders	**30**	**20**	**50**	**100**

Overheads:	**₹**
Setup	**60,000**
Machines	**15,20,000**
Receiving	**8,70,000**
Packing	**5,00,000**
Engineering	**7,46,000**

The Company operates a JIT inventory policy and receives each component once per production run.

Required:

I. Compute the product cost based on direct labour-hour recovery rate of overheads.
II. Compute the product cost using activity based costing. [5+2]

Answer:

I. Traditional method of absorption of overhead i.e. on the basis of Direct Labour Hours

$$\text{Total Overheads} = \frac{36{,}96{,}000}{[\text{Hours}(60{,}000 \times 2.5) + (40{,}000 \times 4) + (16{,}000 \times 2)]}$$

= 36,96,000/3,42,000

= ₹10.81 per labour hour

Calculation of Factory cost of the products under Traditional Method of apportioning overheads:

	A	B	C
	₹	₹	₹
Raw Material	45.000	40.00	22.00
Direct Labour	16.000	24.00	12.00
Overheads (2.5 x 10.81)	27.025	43.24	21.62
Factory cost (Total)	88.025	107.24	55.62

II. Under Activity Based Costing System

Computation of Cost driver's rates

Cost Pool	Cost Driver	Cost per cost driver

Set up cost	No. of production run	60,000/ 60 = ₹ 1,000 per run
Machines	Machine hour rate	15,20,000/ 2,94,000 = ₹5.17 per machine hour
Receiving cost	No. of receipts	8,70,000/ 1,080 = ₹805.56
Packing	No. of deliveries	5,00,000/ 64= ₹7,812.5 per delivery
Engineering	No. of production order	7,46,000/ 100= ₹7,460 per order

(ii) A review, made by the top management of THAKAR LTD. which makes only one product, of the result of first quarter of the year revealed the following:

Sales in units	**10,000**
Loss in ₹	**10,000**
Fixed cost (for the year ₹1,20,000) in ₹	**30,000**
Variable cost per unit in ₹	**8**

The Finance Manager who feels perturbed suggests that the company should at least break even in the second quarter with a drive for increased sales. Towards this, the company should introduce a better packing which will increase the cost by ₹0.50 per unit.

The Sales Manager has an alternate proposal. For the second quarter additional sales promotion expenses can be increased to the extent of ₹5,000 and a profit of ₹5,000 can be aimed at for the period with increased sales.

The Production Manager feels otherwise. To improve the demand, the selling price per unit has to be reduced by 3 per cent. As a result the sales volume can be increased to attain a profit level of ₹4,000 for the quarter.

The Managing Director asks you as a Cost Accountant to evaluate these three proposals and calculate the additional Sales Volume that would be required in each case, in order to help him take a decision. [2+8=10]

Answer:

Results of the first quarter: Sales 10,000 units

Particulars	**Per unit (₹)**	**Amount (₹)**
Variable cost (V)	8	80,000
Fixed cost	3	30,000
Total cost	11	1,10,000
Loss	1	10,000
Sales (S)	10	1,00,000
Contribution (S – V)	2	20,000

Comparative Statement of 3 proposals

Particulars	**Proposal Of**		
	Finance Manager (₹)	**Sales Manager (₹)**	**Production Manager (₹)**
Selling Price per unit	10.00	10.00	9.70
variable cost per unit (8.00 +0.50)	8.50	8.00	8.00
Contribution per unit	1.50	2.00	1.70
Fixed cost	30,000	35,000	30,000
Profit required	Nil	5,000	4,000
B.E.P (Units) =Fixed cost / Contribution per unit [A]	30,000 ÷ 1.50= 20,000	------	------
Sales (Units) = (Fixed cost + Profit) / Contribution per unit [A]	-------	20,000 [(35,000+5,000)/ 2.00]	20,000 [(30,000 + 4,000) / 1.70]

Sales (units) in First Quarter [B]	10,000	10,000	10,000
Additional Sales volume required in Second Quarter as compared to first Quarter [A – B]	10,000	10,000	10,000

(iii) What are the Pre-requisites for Installation of a Uniform Costing System? [3]

Answer:

Essential Pre-requisites for installation of a Uniform costing System:

A successful system of uniform costing requires the following essential requisites for its installation.

- There should be a spirit of mutual trust, co-operation and a policy of give and take amongst the participating members.
- Mutual exchange of ideas, methods used, special achievements made, research and know-how etc. should be frequent.
- Bigger units should take the lead towards sharing their experience and know-how with smaller units to enable the latter to improve their performance.
- Uniformity must be established with regard to several points before the introduction of uniform costing in an unit. In fact, uniformity should be with regard to the following points:
  - Size of the various units covered by uniform costing.
  - Production methods.
  - Accounting methods, principles, and procedures used.
- It should be willing to share/furnish relevant data/information.

3. Answer any two questions. [2x8=16]

(a)

(i) Under what conditions will the appointment of Cost Auditor for conducting Cost Audit be appointed in firm's name? Who will authenticate such reports and how? [3+1=4]

Answer:

The Ministry of Corporate Affairs has decided to approve the appointment of Cost Auditors in firm's name under Sub-Section (2) of Section 233-B of the Companies Act 1956 if such proposal is received from Board of Directors of any Company subject to the following Conditions :

- All the Partners are practicing Cost Accountants within the meaning of Sections 6 and 7 of the cost and works Accountant Act 1959 and
- The firm itself has been constituted with the previous approval of the Central Government / Institute as required under Regulation 113 of the Cost and Works Accountant Act 1959 as amended from time to time. When a firm is appointed as Cost Auditors, authentication of Cost Audit Report is to be done by the Signature of any one of the Partners of the firm in his own hand for and on behalf of the firm. The report should not be signed by merely affixing firm name.

(ii) Write short note on –True and Fair Cost of Production. [4]

Answer.

The Cost Auditor is required to express his opinion on true and fair cost. The cost is said to be true and fair if:

- Accepted cost Accounting principles have been applied while arriving at the cost.
- Costing principles are applied on a consistent basis.

- Costing system appropriate to product is used.
- All material items are considered while arriving at the cost.
- Cost sheet is prepared in prescribed form.
- There is elimination of prior period adjustments in cost sheet.
- Abnormal losses are ignored in determination of cost.

(b)

(i) What are the principal functions of the Cost Auditor in the area of work-in-Progress? [2]

Answer.

In relation to work-in-progress (WIP), the Cost Auditor will look into the following:

- That WIP has been physically verified & that it agrees with the balance stated in the incomplete cost records.
- That the valuation of the WIP is correct with reference to the stage of completion of each job or process and the value in Job Cost Cards or Process Cost Sheet
- That there is no over-valuation or under-valuation of opening or closing WIP, thereby artificially pushing up or down Net Profits or Net Assets.
- That the volume of WIP is not disproportionate as compared with finished turnover/output.

(ii) Enumerate the duties to be performed by a Cost Auditor. [6]

Answer:

The duties to be performed by Cost Auditor are enumerated below:

- To ensure that the proper books of accounts as required by the Cost Accounting Records Rules have been kept by the Company and proper returns for the purpose of his Audit have been received from branches not visited by him,
- To ensure that the Cost Audit Report and the detailed Cost Statements are in the form prescribed by the Cost Audit Report Rules by following sound professional practices i.e. the report should be based on verified data and observations may be framed after the Company has been afforded an opportunity to comment on them.
- To ensure that the underlying assumptions and basis for allocation and absorption of indirect expenses are reasonable and are as per the established accounting principles.
- If the auditor is not satisfied in any of the aforesaid matters, he may give a qualified report along with the reasons for the same.
- He is to send the Cost Audit Report to the Cost Audit Branch within 180 days from the end of the financial year with one copy to the company.
- He is required to send his replies to any clarification that may be sought by the Cost Audit Branch on his report. Sending such replies within 30 days from the date of receipt of communication calling for clarification.

(c)

(i) For what purposes the Cost Auditor refers to Financial Records while conducting the Cost Audit of an entity? [5]

Answer:

Audit Programme – The Cost Audit programme encompasses the regular financial audit procedures like vouching of expenses, verification of assets and determination of cost of assets, etc. hence, financial records should also be seen.

Profit Reconciliation – The Cost Auditor is expected to verify whether the company has reconciled the profits shown by Cost Records with the profit as per Financial Books. Also,

the profits of products covered by the Rules and profits from other products should be segregated. Verification of the Profit Reconciliation Statement calls for a reference to the Financial Ledger also.
Common Information – The Company has to disclose quantitative details of Licensed Capacity, Installed Capacity, Actual Production, Raw Materials Consumption, Finished Goods Sold, Stocks etc. these are common to both financial and cost records and hence the data will be same. Hence, the Cost Auditor has to refer to the financial records also.
Error detection – A comparison between cost records and financial records may throw up the need for inquiry into errors, mistakes and manipulation. Material discrepancy between financial records and cost records will be highlighted in the Reconciliation Statement which would require that the Cost Auditor may examine deviation before reporting on the same.

Hence, it can be inferred that there is a considerable overlapping between financial and cost records. In case of discrepancies or differences, it is desirable that the Cost Auditor should communicate the same to the Company Auditor.

(ii) Your Firm has been appointed as Auditor of ABC Co. The Company has also appointed a Cost Auditor and therefore, the Management had requested your firm not to review Cost Records. Explain. [3]

Answer.

The Management's contention is not correct due to the following reasons

- Sec 233 (B) – The Central Government has the power the order Cost Audit in certain cases. However, it points out that the audit conducted by Cost Auditor shall be in addition to the audit conducted by a Statutory Auditor.
- Section 227 (3) – The Statutory Auditor shall report whether in his opinion, proper books of account as required by law have been kept by the Company, so far it appears from his examination of those books. Proper books of account include Cost Records. Thus, it is the statutory duty of the Auditor to review Cost Records maintenance.
- CARO, 2004 – If the Central Government had prescribed maintenance of Cost Records u/s 209(1)(d), the Auditor shall report on whether or not such accounts and records have been prepared and maintained properly.

4. Answer any three questions. [3x8=24]

(a)

(i) Explain the term Demand. [4]

Answer.

In Economics demand shows the relationship between the prices of a commodity and the quantity of the commodity which the consumer wants to buy at those prices. Demand in Economics is essentially the attitude and reaction of a consumer towards the commodity he wants to buy. Mere desire or wants for a commodity does not constitute demand in Economics.

The desire for a commodity backed by ability and willingness to pay is said to be true demand or effective demand in Economics. A poor beggar who hardly makes both ends meet may wish to have a car but his wish or desire will not constitute demand for car as he can't afford to pay for it although he has desire and willingness to pay.

Thus three things are essential for a desire for a commodity to become effective demand- (1) desire for a .commodity, (2) willingness to pay (3) ability to pay for the commodity.

Demand is meaningless without reference to price and time. The amount demanded must refer to some period of time viz. a year, a month or a week. Demand is expressed with reference to a particular point of time. Likewise demand is always at a price. It means the amount demanded bought at particular going price. The desire without price is not demand in Economics.

Precisely states the demand for a commodity is-the quantity of if that a consumer will buy at various given prices at a given moment of time. Benham states "the demand for anything at given price is the amount of it which will be bought per unit of time at that price".

(ii) A radio manufacturer produces 'x' sets per week at total cost of ₹ $x^2 + 78x + 2{,}000$.He is a monopolist and the demand function for his product is $x = (600 – p) / 8$, when the price is 'p' per set shows that maximum net revenue is obtained when 29 sets are produced per week what is the monopoly price. [4]

Answer:

Cost (C) = $x^2 + 78x + 2{,}000$

Demand (D) $x = (600 – p) / 8$

$8x = 600 – p$

Therefore, $p = 600 – 8x$

Total Revenue per 'x' sets

Price x i.e., $600x – 8x^2$

Maximum revenue is obtained at MC = MR

Marginal Cost= $\frac{dc}{dx} = 2x + 78$ - - - - - (i)

Marginal Revenue = $\frac{dr}{dx} = 600 - 16x$ - - - -(ii)

Equity (i) and (ii)

$2x + 78 = 600 – 16x$

$= 18x = 522$

Therefore, $x = 29$

Monopoly price $600 – 8x$

$= 600 – 8 \times 29$

$= 600 – 232$

$= 368$

(b) What are the criteria of a good forecasting method? [8]

Answer.

Criteria of a good forecasting method are:

- **Accuracy -** It is essential to check the accuracy of the past forecasts against present performance and of present forecast against future performance.
- **Simplicity and Ease of comprehension-**Management must be able to understand the method of demand forecasting used and must have confidence in it. Too much of mathematical and econometric procedures may not find favour with the management.

- **Economy-** A good demand forecasting method is one which is highly economical. Thus it is necessary to compare the cost of the forecasting method against its likely benefits. It is desirable so to undertake cost benefit analysis.
- **Durability-** The technique of demand forecasting must be durable.
- **Effective-** The technique used for demand forecasting should be able to give meaningful result as early as possible. So the technique must be effective and productive.
- **Flexibility-** The forecasting procedure should permit changes to be made in the relationship between different variables as & when needed. It must be not rigid.
- **Maintenance of timeliness-** It must be in up to date basis. There must be continuous alterations & addition involving latest information and data.
- Longer the lead time the forecast has before the event, the greater will be its usefulness.

(c)

(i) AJANTA FOOTWEARS LTD. intends to introduce in the market two products of the following characteristics:

I. 'Comfort walk'-shoe for elderly people—considered quite new in the market with a high degree of consumer acceptability.

II. 'Glamour' sandals (with coloured laces crossing) for young LADIES—considered to be one which is already served by other well known brands. State suitable pricing strategies, together with your valid arguments, for each of them separately. [2+2]

Answer:

I. When the product is new but with a high degree of consumer acceptability, the firm should decide its pricing strategy in favour of Skimming Pricing Strategy, i.e., charging a higher mark-up and therefore charge a high price. This would help to 'skim the cream' from the market. As the demand for the new product is relatively inelastic the high prices will not stop the new consumers from demanding the product. The new product, together with its novelty and special characteristics, commands a better price. If the life of the product promises to be a short one, the management should fix high price so that it can earn, as, much profit as possible and in as short a period as possible.

II. The product is already served in the market by well-known brands. So, a low price is necessary to attract gradually the consumers who are already accustomed to other brands. This low price strategy is termed Penetration Pricing Strategy. This low price will help to maximize the sales of the product even in the short period. Since product differentiation is low, the objective of the firm should be to fix low price so as to establish a strong base in the market, build goodwill among customers and strong consumer loyalty.

(ii) A firm has revenue function given by R=10Q where R=Gross Revenue and Q=Number of Units Sold, Production Cost function is given by C = 20000+ 50(Q / 800)2
Find:

I. the total Profit function, and

II. The number of Units (Q) to be sold to get the maximum Profit. [1+3]

Answer:

R = 10Q

$$C = 20000 + 50\left(\frac{Q}{800}\right)^2$$

$$\text{Profit (P)} = 10Q - 20000 - 50\left(\frac{Q^2}{640000}\right) \text{(Profit function)}$$

To find number of units to get the maximum profit,

$\frac{dP}{dQ} = 0$ and $\frac{d^2P}{dQ^2}$ should be - ve

$$= \frac{dP}{dQ} = 10 - \frac{50 \times 2Q}{640000} = 0$$

$$\Rightarrow 10 - \frac{100Q}{640000} = 0$$

$$\text{Therefore, } Q = \frac{640000 \times 10}{100} = 64000$$

$$\frac{d^2P}{dQ^2} = -\frac{100}{640000} = -\frac{1}{6400} \text{ Which is negative(-ve)}$$

P (Profit) is maximum at Q = 64000 units

$$\text{Maximum Profit } = 10 \times 64000 - 20000 - 50\left(\frac{64000^2}{640000}\right)$$

$$= 6{,}40{,}000 - 20{,}000 - 3{,}20{,}000 = ₹3{,}00{,}000$$

(d) List out the factors influencing Elasticity of Demand? [8]

Answer.

- **Nature of goods:**
  Elasticity of demand depends on the nature of goods. The elasticity of demand for a commodity depends upon the necessity of it for a human life. Goods may be necessary for human life, comfort or luxurious. Necessary goods are extremely essential so the demand for these goods-is inelastic.
  But the consumption of comfort and luxury goods enhances man's efficiency and social prestige. So their consumption is less important and can be very well postponed. Thus the elasticity of demand for such commodities is elastic.
- **Availability of substitutes:**
  The demand for a commodity having perfect substitute is relatively more elastic. If a flood gives the same pleasure and satisfaction in place of the consumption of another commodity, it is called a substitute commodity. A substitute may be close and remote.
  Close substitute has got more elastic demand and remote substitute has less elastic demand. Tea and coffee are substitute commodities. Both can be used in absence of another. Thus the demand for tea and coffee is elastic.
- **Alternative use:**
  The demand for those goods having more than one use is said to be elastic. In other words goods having alternative uses are elastic. All the uses are not of same importance. As the commodities are put to certain less urgent needs or uses as a result of fall in price their demand raises. People use those commodities for certain urgent use in response to a rise in price.

For example electricity can be used for a number of purposes like heating, lighting, cooking, cooling etc. If the electricity hill increases people utilise electricity for certain important urgent purpose and if the bill falls people use electricity for a number of other unimportant uses. Thus the demand for electricity is elastic.

- **Possibility of postponing consumption:**
  The demand for those goods whose consumption can be postponed for sometime is said to be elastic. On the other hand if the commodities cannot be postponed and need to be fulfilled the demand for them is in elastic.
  Medicine for a patient, books for a student and milk for a child cannot be postponed. They are to be satisfied first. That is why the demand for those commodities is in elastic.
- **Proportion of income spent:**
  Elasticity of demand also depends on the proportion of income spent on different goods. The demand for those goods on which a negligible amount of the total income of the consumer is spent is said to be inelastic.
  Salt, edible oil, match box, soap etc account for a very negligible amount of the consumer income. That is why their demand is inelastic.
- **Price-level:**
  The demand for high priced commodities is elastic. On the other hand the low priced goods is said to have inelastic demand. High priced commodities are luxurious goods and low priced goods are necessaries. Luxurious goods are mainly consumed by the people of high income brackets. For example if the price of a colour TV falls from ₹15000 to ₹5000 the price comes to the reach of the people who were unable to buy at the old price.
  Now they rush to buy colour TV. Thus with a rise or fall in price the amount demanded of colour TV remarkably falls or rise. But if the price of salt raises from ₹2.00 to ₹5.00 it account for no such remarkable fall in the quantity demanded of salt.
- **Force of habit:**
  A repeated and constant use of a commodity by a person forms habit. A habit can't be avoided. Thus in such a case the consumption of the commodity can't be abstained in spite of the rise in price.
  The consumer has to satisfy his habit regardless of change in price. Thus the demand for habitual commodities is fairly inelastic.
- **Durability of Commodities:**
  The demand for durable commodities is elastic whereas the demand for less durable commodity is inelastic. Durable commodity is used over a long period of time. The utility of a durable good is destroyed continuously. Once a durable good is bought the buyer feels no want of it for a long period of time. Thus the change (rise or fall) in price can't influence the demand.
  Thus the demand becomes elastic. On the other hand less durable or perishable goods are consumed repeatedly. Any change in price affects the demand. Thus the demand for perishable goods is less elastic.
- **Income level:**
  Elasticity of demand depends on income level. The rich and the poor are not equally affected at the change in price. Poor people are more affected than the rich. Because of high income rich people buy the same amount of an expensive commodity in response to a rise in price.
  For example with a rise in price of Horlicks, poor people by other milk powder relatively cheaper than Horlicks. Thus for rich people the demand for Horlicks is inelastic whereas for poor people the demand for the Horlicks is elastic.