

PTP_Final_Syllabus 2008_Dec2014_Set 3

Paper- 15: MANAGEMENT ACCOUNTING – ENTERPRISE PERFORMANCE MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.
Attempt Question No. 1 (carrying 25 marks), which is compulsory and any five more questions (each carrying 15 marks) from the rest.

Please: (i) Answer all part of a question at one place only.

(ii) Open a new page for answer to a new question.

Working Notes should form part of the answer.

Whenever necessary, suitable assumptions should be made and indicated in answer by the candidates.

1. (a) In each of the cases given below, only one is the most appropriate option. Indicate the correct answer (=1 mark) and show your workings/reasons briefly in support of your answer (=1 mark): [2×5=10]

(i) Nulook Ltd. Uses a JIT system and back flush accounting. It does not use a raw material stock control account During May, 8000 units were produced and sold. The standard cost per unit is ₹ 100; this includes materials of ₹ 45. During May, ₹ 4,80,000 of conversion costs were incurred.

The debit balance on cost of goods sold account for May was

(A) ₹ 8,00,000

(B) ₹ 8,40,000

(C) ₹ 8,80,000

(D) ₹ 9,20,000

(ii) A concern sells three products. The budgeted fixed cost for the period is ₹ 6,00,000. The budgeted contribution to sales ratio (C/S ratio) and the sales mix are as under

Product	C/S ratio	Mix
Super	25%	20%
Premium	40%	40%
Best	30%	40%

What is the Break Even sales revenue?

(A) ₹ 30,10,181

(B) ₹ 15,23,312

(C) ₹ 18,18,181

(D) ₹ 17,60,500

(iii) The selling price of product P is set at ₹ 1,500 for each unit and sales for the coming year are expected to be 500 units.

If the company requires a return of 15% in the coming year on its investment of ₹ 15,00,000 in product P. The Target cost for each unit for the coming year is.

(A) ₹ 930

(B) ₹ 990

(C) ₹ 1,050

(D) ₹ 1,110

(iv) B Ltd. Has earned net profit of ₹ 1 lakh, and its overall P/V ratio and margin of safety are 25% and 50% respectively. What is the total fixed cost of the company?

(A) ₹ 1,20,000

(B) ₹ 1,00,000

(C) ₹ 1,15,000

(D) ₹ 1,20,000

- (v) If the time taken to produce the first unit of a product is 4000 hrs, what will be the total time taken to produce the 5th to 8th unit of the product, when a 90% learning curve applies?
- (A) 10,500 hours
 - (B) 12,968 hours
 - (C) 9,560 hours
 - (D) 10,368 hours

(b) Expand the following abbreviation: **[1×5]**

- (i) ICS
- (ii) EOQ
- (iii) SCRS
- (iv) PMS
- (v) QIS

(c) Define the following terms: **[1×5]**

- (i) Zero defects
- (ii) Kaizen
- (iii) EFQM
- (iv) Simulation
- (v) Experience Curve

(d) State whether the following statements given below are 'True' or 'False'. If True, simply rewrite the given statement (1 mark). If False, state it as False (½ mark) and rewrite the correct statement (½ mark): **[1x5]**

- (i) It is appropriate to view the value chain from the customer's perspective, with each link being seen as the customer of the previous link.
- (ii) One of the goals JIT seeks to achieve is batch sizes of one.
- (iii) The concept of value analysis was first conceived by Jerry Kaufman.
- (iv) 'Symbiotic relationship' is one in which the cooperative action of semi-independent sub-systems taken together produces a total output greater than the sum of their outputs taken independently.
- (v) Balance Score Card is a performance measurement tool for controlling individual productivity.

2. (a) A firm received an order to make and supply eight units of standard product which involves intricate labour operations. The first unit was made in 10 hours. It is understood that this type of operations is subject to 80% learning rate. The workers are getting a wages rate of ₹ 12 per hour.

- (i) What is the total time and labour cost required to execute the above order?
- (ii) If a repeat order of 24 units is also received from the same customer, what is the labour cost necessary for the second order? **[3+2]**

(b) The manager of a book store has to decide the number of copies of a particular tax law book to order. A book costs ₹ 60 and is sold for ₹ 80. Since some of the tax laws change year after year, any copies unsold while the edition is current must be sold for ₹ 30. From past records, the distribution of demand for this book has been obtained as follows:

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Demand (No of copies)	15	16	17	18	19	20	21	22
Proportion	0.05	0.08	0.20	0.45	0.10	0.07	0.03	0.02

Using the following sequence of random numbers, generate the demand for 20 time periods (years). Calculate the average profit obtainable under each of the courses of action open to the manager. What is the optimal policy? **[10]**

Random Numbers:

14	02	93	99	18	71	37	30	12	10
88	13	00	57	69	32	18	08	92	73

3. ROLEX Ltd., had nearly completed a job relating to construction of a specialized equipment, whence it discovered that the customer had gone into liquidation. At this stage, the position of the job was as under:

Particulars	₹
Original cost estimate	1,75,500
Costs incurred so far	1,48,500
Cost to be incurred	30,000
Progress payment received from the original customer:	1,00,000

After searches, a new customer for the equipment has been found. He is interested to take the equipment, if certain modifications are carried out. The customer wants the equipment in its original condition but without its control device and with certain other modifications.

The costs of these additions and modifications are estimated as under:

	₹
Direct material at cost	1,050
Direct wages: Department-A 15 man-days	
Department-B 25 man-days	
Variable overheads 25% of direct wages in each department.	
Delivery costs:	1,350
Fixed overheads will be absorbed @50% of direct wages in each department.	

The following additional information is available:

- (a) The direct materials required for the modification are in stock and if not used for modification of the order, they will be used in another job in place of material that will now cost ₹ 2,500.
- (b) Department-A is working normally and hence any engagement of labour will have to be paid at the direct wages rate of ₹120 per man-day.
- (c) Department-B is extremely busy. Its direct wage rate is ₹100 per man-day and it is currently yielding a contribution of ₹3.20 per rupee of Direct wages.
- (d) Supervisory overtime payable for the modification is ₹ 1,050.
- (e) The cost of control device that the new customer does not require is ₹13,500. If it is taken out, it can be used in another job in place of a different mechanism. This latter mechanism has otherwise to be bought for ₹ 10,500. The dismantling and removal of the control mechanism will take one man-day in Department-A.
- (f) If the conversion is not carried out, some of the materials in the original equipment can be used in another contract in place of materials that would have cost ₹ 12,000. It would

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have taken two-man-days of work in Department-A to make them suitable for this purpose.

The remaining materials will realize ₹ 11,400 as scrap. The drawings which are included as a part of the job can be sold for ₹ 1,500.

You are required to calculate the minimum price that ROLEX Ltd., can afford to quote for the new customer, as stated supra. **[15]**

4. (a) Distinguish between Standard Costs and Estimated Cost. **[5]**

(b) The following data are available:

Item	Budget	Actual
No. of working days	20	22
Output per man-hour	1.0 unit	0.9 unit
Fixed Overhead cost	₹ 1,60,000	₹ 1,68,000
Man-hours per day	8,000	8,400

You are required to calculate:

- (i) Fixed Overhead efficiency Variance
- (ii) Fixed Overhead Capacity Variance
- (iii) Fixed Calendar Variance
- (iv) Fixed Overhead Volume Variance and
- (v) Fixed Overhead Cost Variance. **[2x5]**

5. (a) X Ltd. has to decide between rentals of two types of machine manufacturing the same product. Machine A, an inexpensive economy model, rents for ₹1,000 per month, but the variable production cost is ₹ 0.25 per unit. Machine B rents for ₹ 3,000 per month, but the variable production cost is only ₹ 0.10 per unit. Monthly demand varies between 10,000 and 19,000 according to the following probabilities:

Demand	Probability
10,000	0.12
12,000	0.17
15,000	0.41
17,000	0.24
19,000	0.06

Make a comparison of the two machines. Which machine X Ltd. should rent? If the demand is definitely known to be 10,000 units, would the decision reverse? **[6]**

- (b) What is Standard Costing? And what are the General Principles of Standard Costing? **[4+5]**

6. (a) 18 carpets had defects in their finish as follows. Supposing the defects follow the 'Chart' draws a control chart for the number of defects. **[8]**

No. of Defects	0	1	2	3	4	5	6
No. of carpets having specified No. of Defects	0	1	2	4	3	5	3

(b) What are the various stages/steps to be taken in the implementation of Total Quality Management? [7]

7. A farmer owns an orchard which has an area of 300 acres on which he grows apples, apricots, Cherrie and plums of the total area, 200 acres of land are suitable for growing apricots and cherries and in the remaining acres of land any of the four fruits can be grown.

The marketing policy requires that in each season all the four types of fruits must be produced and the quantity of any one of the four fruits should not be less than 12,000 boxes.

It is essential that the area devoted to any one should be in terms of complete acres and not in fractions of an acre. There are no physical or marketing limitations and there is an adequate supply of all types of labour.

The details regarding the selling price, production and cost are given below

Particulars	Apples	Apricots	Cherries	Plums
Selling price per box ₹	10	10	20	30
Acreage at each present devoted to each line	120	70	80	30
Seasons yield in boxes per acre	500	150	100	200
Weight per box kg	30	30	40	20
Cost (₹):				
Direct: Material per acre	180	70	60	100
Labour:				
Growing per acre	200	150	100	130
Harvesting & Picking per box	1	1	2	3
Transport per box	2	2	1	3

Fixed overhead incurred each seasons:

	₹	Basis of apportionment to produce
Cultivation and growing	27,840	Direct labour cost incurred
Harvesting	20,900	Direct labour cost incurred
Administration	42,250	No. of boxes produced
Transport	5,110	Weight produced
Land revenue	9,000	No. of acres cultivated

Using above information, you are required to:

- (1) Calculate profit and loss per box of each type of fruit that the farmer will obtain from operating the orchard on the present basis.
- (2) Advise the farmer on the area to be allocated to each item in order to earn the maximum total profit. [12+3]

8. Write Short Notes on any three out of the following:

[3x5]

- (i)** McKinsey's 7-S Framework
- (ii)** Succession Planning
- (iii)** Matrix Organization
- (iv)** Enterprise Resource Planning (ERP)