

MTP_Final_Syllabus 2008_Dec2014_Set 2

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) PLCM
- (ii) HRP
- (iii) COSU
- (iv) EFQM
- (v) PDCA

(c) Define the following terms:

[1×5]

- (i) Vat analysis;
- (ii) Detector;
- (iii) Control Chart ;
- (iv) Query tools;
- (v) Generic Benchmarking.

(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):

[1×5]

- (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.

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2. (a) The frequency distribution of Contribution per Unit, Annual Demand and Investment requirement of a manufacturing Company were found as below –

Contribution per Unit (₹)	3	5	7	9	10
Relative frequency	0.1	0.2	0.4	0.2	0.1

Annual demand (in 1000 units)	20	25	30	35	40	45	50
Relative frequency	0.05	0.10	0.20	0.30	0.20	0.10	0.05

Required Investment (₹000s)	1,750	2,000	2,500
Relative frequency	0.25	0.50	0.25

Consider the random number 93, 03, 51, 59, 77, 61, 71, 62, 99, 15 for simulating 10 run, to estimate the Percentage of Return on Investment ($ROI = \text{Cash inflow} \div \text{Investment} \times 100$) for each run. Find the average ROI. **[10]**

- (b) What is lean manufacturing? Briefly describe the lean/JIT system. **[5]**

3. (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]

4. (a) Explain briefly the different perspective of a Balanced Score Card. **[1+4]**

- (b) N LTD., has adopted a Standard Costing System. The Standard output for 20,000 units. The Standard Cost and Profit per unit is given below:

Particulars	₹
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Direct Materials (6 units @ ₹ 1.50)	9.00
Direct Labour (6 units @ ₹ 1.00)	6.00
Direct Expenses	1.00
Factory Overheads :	
Variable	0.50
Fixed	0.60
Administrative Overheads	0.60
	17.70
Profit per unit	2.30
Selling Price (Fixed by Government)	20.00

Actual production and sales for a period was 14,400 units. The following are the variance worked out at the end of the period:

Particulars	Favourable (₹)	Adverse (₹)
Direct Materials :		
Price Variance	-	8,500
Usage Variance	2,100	-
Direct labour :		
Rate Variance	-	8,000
Efficiency Variance	6,400	-
Factory Overheads :		
Variable Expenditure Variance	800	-
Fixed Expenditure Variance	800	-
Fixed Volume Variance	-	3,360
Administrative Overheads :		
Expenditure Variance	-	800
Volume Variance	-	3,360

You are required to:

- (i) Ascertain the details of cost and prepare the Profit and Loss Account in the statement for the period, showing actual profit.
- (ii) Reconcile the actual profit with the standard profit. **[(5+3)+2]**

5. (a) A Company paid ₹2,00,000 and acquired a machine on 1-10-2010. Its annual operation cost is ₹ 15,000 excluding depreciation. The machine will have a 5-year useful life with zero terminal value.

The machine was just put on trial and was used for one day when the supplier offered a different model to do the same job. The annual operating cost of the revised model is ₹ 9,000 exclusive of depreciation. The new machine will cost ₹24,000. The old machine can be sold for ₹10,000. The cost of removal of the old machine is ₹2,000. The new machine will also have a five-year life with zero terminal value. Sales will be ₹2,50,000 per annum and all other cash costs will be ₹2,10,000 per annum regardless of the decision to change the machine. The machine is installed in a separate building and the written down value of the building is ₹5,00,000. If this building is sold now, it will fetch ₹10 lakhs but the company proposes to use the building for installing the machine.

You are required to explain whether each item of income or expense or cost stated above is relevant or not in deciding on the replacement of the machine. **[4]**

(b) Five Swimmers are eligible to compete in a relay team that should have four swimmers swimming different styles- backstroke, breaststroke, free style and butterfly. The time taken for the five swimmers - Anand, Balu, Chandru, Deepak and Eswar – to cover a distance of 100 metres in various swimming styles are given below in minutes: seconds. Anand swims backstroke in 1:09, breaststroke in 1:15 and has never competed in free style or butterfly. Balu is a free style specialist averaging 1:01 for 100 metres but can also swim breaststroke in 1:16 and butterfly in 1:20. Chandru swims all styles, backstroke 1:10, breaststroke 1:12, free style 1:05 and butterfly 1:20. Deepak swims only butterfly at 1:11 while Eswar swims backstroke 1:20, breaststroke 1:16, free style 1:06 and butterfly 1:10. Which swimmers should be assigned to which swimming style? Who will not be in the team? **[8]**

(c) State what is Cause – Effect Diagram and when should it be used? **[3]**

6. **(a)** A review, made by the top management of W & W Ltd. which makes only one product, of the result of the first quarter of the year revealed the following:

Sales in units	20,000
Loss	₹20,000
Fixed cost (for the year ₹2,40,000)	₹60,000
Variable cost per unit	₹8.00

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 better packing which will increase the cost by ₹0.50 per unit.

The Sales Manager has an alternative proposal. For the second quarter additional sales promotion expenses can be increased to the extent of ₹10,000 and a profit of ₹10,000 can be aimed at during 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%. As a result the sales volume can be increased to attain a profit level of ₹8,000 for the quarter.

The Manager Director asks you as a Cost Accountant to evaluate the three proposals and calculate the additional sales volume that would be required in each case, in order to help him to take a decision. **[10]**

(b) Outline the limitations of Standard Costing. **[5]**

7. **(a)** Write a note on Total Quality Management.

(b) Differentiate between Quality Planning, Quality Control & Quality Improvement.

(c) State the uses of Learning Curve. **[5+5+5]**

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8. (a) What is Intranet? What are its advantages? [1+4]

(b) An engineering company produces two products A and B. The cost data are as under:

Particulars	A (₹)	B (₹)
Selling Price	175	220
Direct Material	40	80
Direct Labour	60	40
Variable Overheads	30	20

Each product undergoes an operation in the two departments, viz. cutting and finishing, before it emerges as a finished product. The unit time taken by the products and the maximum available hours in the cutting and finishing operations are given below:

Product	Cutting hours	Finishing Hours
A	5	10
B	20	15
Maximum hours available	400	450

Required:

Formulate the above problem in a linear programming problem.

[3]

(c) Dry Twigs and Fresh Blossoms Ltd. is always discarding old lines and introducing new lines of products and is at present considering three alternative promotional plans for ushering in new products. Various combinations of prices, development expenditures and promotional outlays are involved in these plans. High, medium and low forecasts of revenues under each plan have been formulated; and their respective probabilities of occurrence have been estimated. These budgeted revenues and probabilities along with other relevant data are summarized as under:

Particulars	₹ in lakhs		
	Plan I	Plan II	Plan III
Budgeted Revenue with probability:			
- High	30(0.3)	24(0.2)	50(0.2)
- Medium	20(0.3)	20(0.7)	25(0.5)
- Low	5(0.4)	15(0.1)	0(0.3)
Variable cost as % of Revenue	60%	75%	70%
Initial Investment	25	20	24
Life in years	8	8	8

The company's Cost of Capital is 12%; the income tax rate is 40% (say). Investments in promotional programmes will be amortized by the straight-line method. The company will have net taxable income in each year, regardless of the success or failure of the new products. The present value of an annuity of ₹ 1 at 12% for 8 years is 4.9676.

(i) Substantiating with figures makes a detailed analysis and find out which of the promotional plans is expected to be the most profitable.

(ii) In the event the worst happened, which of the plans would result in the maximizing profit? [7]