FINAL EXAMINATION

June 2013

F–P15(EPM)
Syllabus 2008

Management Accounting-Enterprise Performance Management

Time Allowed: 3 Hours | Full Marks: 100

The figures in the margin on the right side indicate full marks.

Answer Question No. 1 *(carrying 25 marks), which is compulsory and* any five *more 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.

1. (a) 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 ($\frac{1}{2}$ mark) and rewrite the correct statement ($\frac{1}{2}$ mark) : 1×5

(i) Value Chain Concept and Value Added Concepts are fundamentally same.

(ii) Value Analysis Process is a less important tool than Function Analysis System Technique.

(iii) Effector is another name for Management Information System.

(iv) JIT manufacturing based on 'Push Through Philosophy', helps to provide the right parts at the right time and in right quantity.

(v) A company's approach to make or buy decision depends on whether the company is operating at or below normal volumes.

(b) 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

(i) ASHLEEN Ltd., developing a new product, makes a model for testing and goes for regular production. From past experience of similar models, it is known that a 90% learning curve applies. If the time taken to make the model is 300 hours, what will be the total time taken to produce 3rd to 4th unit of the product?

A. 540 hours
B. 486 hours
C. 432 hours
D. None of the above.

(ii) A company has a capacity to make 4,00,000 units of a product. It has noted from market conditions that at a price of Rs.50 per unit, it can sell 1,00,000 units but the demand would double for each Rs.5 fall in the selling price. A minimum margin of 25% is required. The target cost for the company should be :

A. Rs.50
B. Rs.40
C. Rs.30
D. Rs.20

(iii) ABC Ltd., has current PBIT of Rs.19.20 Lakhs on total assets of Rs.96 Lakhs. The company proposes to increase assets by Rs. 24 Lakhs, which is estimated to increase operating profit before depreciation by Rs.8.40 Lakhs-a net increase in Depreciation by Rs.4.80 Lakhs. This will result in ROI.

A. To decrease by 1%
B. To increase by 1%
C. To remain same
D. None of the above.

(iv) Division A of a company manufactures a single product and the following data are provided:
Sales = 25,000 units   Fixed Cost = Rs.4,00,000
Depreciation = Rs.2,00,000   Residual Income = Rs.30,000
Net Assets = Rs.10,00,000
Head Office assesses divisional performance by the method of Residual Income and uses cost of capital of 12%.
The average contribution per unit for Division A is:
A Rs.25
B. Rs.30
C. Rs.35
D. None of these.

(v) XYZ Ltd., is preparing its Sales Budget for the coming 3 months. The Sales Department has given an estimate that Sales will be 1,20,000 units, if the monsoon is good and 80,000 units if the monsoon is poor. The probability that the monsoon will be poor is 0.4. The expected Sales Volume for next quarter would be:
A. 72,000 units
B. 32,000 units
C. 1,04,000 units
D. None of these.

(c) Fill in the blanks with the most appropriate word(s) out of the options indicated in the bracket against each statement: 1×5

(i) The adoption of JIT normally requires to improve ___________ (Production time/Quality Standard).

(ii) FAST or Function Analysis System Technique is an evolution of the ___________ (Quality Function Deployment/Value Analysis) process.

(iii) One of the ten principles of Lean Supply Chain is to 'make your customers and suppliers your real ___________ ' (Friends/Partners).

(iv) ___________ (Internets/Intranets) can help users to locate and view information faster.

(v) A ___________ (Management Culture/Management Style/Organizational Structure) consist of shared values, beliefs and norms of organization.

(d) Explain the following terms, in not more than one-two sentences: 1×5

(i) Aggregate Planning
(ii) Chase Strategy
(iii) The Theory of Constraints
(iv) Vat analysis
(v) Materials Requirement Planning.

2. (a) What is Intranet? What are its advantages? 1+4

(b) B,D,P and Q are the four types of products that appear in the pricelist of DEPORTIVO Ltd., with a note that a particular item or items may not be available on demand. The demand for the products is more than what the company can supply and non-supply of any of them will have no effect on the demand for the rest.

For the year 2013-14, the company has made the following tentative budget that will use up all the available supplies of materials and labour in that year.

A linear programming was made by the company's accountant who stated that the opportunity costs or the shadow price came to Rs.3.00 per labour hour and Rs.19.50 per kg. of material. He also suggested the product-mix which has since been forgotten. The accountant has left the company. The company now asks you as their Management Consultant to give your opinion about the budgeted programme.

Data from the tentative budget for 2013-14 is:

Product	B	D	P	Q
Production/Sales (units)	2000	2400	3200	1600
Selling Price per units (Rs.)	120	156	144	180
Variable Cost per unit (Rs.)	72	96	60	84
Labour hours per unit	3	4	2	5
Material Usage per unit (Kg.)	2	3	4	5

Required:

(i) Determine the optimal sales-mix for the company.

(ii) What difference the sales-mix in (i) will make from that in the tentative Budget in respect of the contribution? 10

3. ROLTA 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:

	Rs.
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:

	Rs.
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 are 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 Rs.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 Rs.120 per man-day.

(c) Department-B is extremely busy. Its direct wage rate is Rs.100 per man-day and it is currently yielding a contribution of Rs.3.20 per rupee of Direct wages.

(d) Supervisory overtime payable for the modification is Rs.1,050.

(e) The cost of control device that the new customer does not require is Rs.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 Rs.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 Rs.12,000. It would have taken two-man-days of work in Department-A to make them suitable for this purpose.

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

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

4. (a) What is 'Kaizen Costing'? Write a short note on it. 1+4

(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	Rs.1,60,000	Rs.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. 2×5

5. (a) Explain the role of Cost and Management Accountant into a Target Costing Environment. 5

(b) Ruhika Automoblies Pvt. Ltd., manufactures around 150 scooters. The daily production varies from 146 to 154 depending on the availability of raw material and other working conditions.

The following data is available:

Production (units)	146	147	148	149	150	151	152	153	154
Probability	0.04	0.09	0.12	0.14	0.11	0.10	0.20	0.12	0.08

The completed units of scooters are transported in a specially arranged truck accommodating 150 scooters.

The Despatch will be equal to the opening stock plus daily production or 150 scooters, whichever is less. Empty Space are applicable only when the despatch is less than 150 scooters.

Assume that the opening stock on day-1 is Nil.

Using the following random numbers:

80,81,76,75,02,43,03,26,10,12,65,68,69,61 and 57.

Simultate for 15 days to find out:

(i) The average number of scooters waiting in the factory and
(ii) The average number of empty space on the truck. 10

(a) Write a note on Total Quality Management. 5

(b) What are the various stages/steps to be taken in the implementation of Total Quality Management? 10

(a) A company is considering the purchase of a new machine, which has a three year life and will lead to increase the profit in each of the next 3 years. However, due to uncertainty in demand, the annual additional cash flow resulting from the purchase of the new machine can not be determined with certainty and have, therefore, been estimated probabilistically as under:

Year-I		Year-II		Year-III	
Annual Cash flow (Rs. Lakh)	Probability	Annual Cash flow (Rs. Lakh)	Probability	Annual Cash flow (Rs. Lakh)	Probability
10	0.30	10	0.10	10	0.20
15	0.50	20	0.30	20	0.50
20	0.20	30	0.40	30	0.30
		40	0.20		

The cost of the new machine is Rs.42 Lakhs and will have no salvage value at the end of the 3rd. year. Based on the average cash flow for each year, advise whether it would be advisable to purchase the machine. The company's cost of capital is 15%.

Present value of Re.1 at 15% discount rate is:

Year	I	II	III
PV	0.8696	0.7561	0.6575

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(b) The standard cost card of a product X is as under:

	Rs.	Rs.
Direct Material – Item A 10 kg@ Rs.10	100	
– Item B 5 kg @ Rs. 5	25	125
Direct Wages – 5 hrs.@ Rs. 4		20
Fixed Production Overheads		25
Total Standard Cost		170
Standard Gross Profit		30
Standard Selling Price		200

During the month just concluded, the following were the actual results for the production of 800 units.

		Rs.
Sales 800 units	@ 200 per unit	1,60,000
Direct Material	Item A 7800 Kg.	79,950
	Item B 4200 Kg.	20,160
Direct Wages	4200 hrs.	12,075
Fixed Overheads		23,500
		1,35,685
Gross Profit		24,315

Material Price Variance is calculated at the point of issue.

Material purchased were Item A 9000 Kg @ Rs.10.25 per Kg and Item B @ Rs.4.80 per Kg.

There was no Opening Stock.

You are required to calculate:

(i) Material Pric e Variance

(ii) Material Usage Variance

(iii) Labour Rate Variance and

(iv) Labour Efficiency Variance. 2×4

8. Write Short Notes on *any three* out of the following: 3×5

(i) McKinsey's 7-S Framework

(ii) Succession Planning

(iii) Basic Steps for implementing Lean/JIT Production

(iv) Matrix Organization

(v) Crowned Prince Syndrome.