

Test Series: February, 2013

MOCK TEST PAPER – 1

FINAL COURSE: GROUP – II

PAPER – 5: ADVANCED MANAGEMENT ACCOUNTING

Question No. 1 is compulsory

*Answer any **five** questions from the remaining **six** questions*

Time Allowed – 3 Hours

Maximum Marks – 100

1. (a) "It's frustrating working with Denial. He's very dominant and expects everything to be done his way. We have done more and better work to get up to budget, and the minute we make it he tightens the budget on us. We can't work any faster and still maintain quality. We always seem to be interrupting the big jobs for all those small rush orders. The accountants seem to know everything that's happening in my department, sometimes even before I do. I thought all that budget and accounting stuff was supposed to help, but it just gets me into trouble. I'm trying to put out quality work; they're trying to save money. This is a dead end job. I don't see much of a future here." said Mr. Singh, manager of the machine shop of Global Mfg. Ltd. a UK based Company.

Mr. Singh had just attended the monthly performance evaluation meeting for plant department heads. These meetings had been held on the third Friday of each month since Mr. Denial, MBA from Manchester University, had joined the Indian operations a year earlier. Mr. Singh had just been given the worst evaluation he had ever received in his long career with Global Mfg. Ltd. He was the most respected of the experienced machinists in the company. Old Plant Manager had often stated that the company's success was due to the high quality of the work of machinists like Mr. Singh. He had been with Global Mfg. Ltd. for many years and was promoted to supervisor of the machine shop when the company expanded and moved to its present location. As supervisor, Mr. Singh stressed the importance of craftsmanship and told his workers that he wanted no careless work coming from his department.

When Mr. Denial became the plant manager, he directed that monthly performance comparisons be made between actual and budgeted costs for each department. The departmental budgets were intended to encourage the supervisors to reduce inefficiencies and to seek cost reduction opportunities. The company controller was instructed to have his staff 'tighten' the budget slightly whenever a department attained its budget in a given month; this was done to reinforce the plant supervisor's desire to reduce costs. Mr. Denial often stressed the importance of continued progress toward attaining the budget; he also made it known that he kept a file of these performance reports for future reference.

You are required to identify the problems which appear to exist in budgetary control system and explain how budgetary control system could be revised to improve the effectiveness. (9 Marks)

- (b) Managing Director of Superb-Tech Product Ltd (STPL) thinks that Standard Costing has little to offer in the reporting of material variances due to frequently change in price of materials.

STPL can utilize one of two equally suitable raw materials and always plan to utilize the raw material which will lead to cheapest total production costs. However STPL is frequently trapped by price changes and the material actually used often provides, after the event, to have been more expensive than the alternative which was originally rejected.

During last accounting period, to produce a unit of 'X' STPL could use either 2.50 Kg of 'XG' or 2.50 kg of 'XD'. STPL planned to use 'XG' as it appeared it would be cheaper of the two and plans were based on a cost of 'XG' of ₹ 1.50 per Kg. Due to market movements the actual prices changed and if STPL had purchased efficiently the cost would have been:

'XG' ₹ 2.25 Kg; 'XD' ₹ 2.00 Kg

Production of 'X' was 1,000 units and usage of 'XG' amounted to 2,700 Kg at a total cost of ₹ 6,480/-

You are required to analyze the material variance for 'X' by:

- (i) Traditional Variance Analysis; and
- (ii) An approach which distinguishes between Planning and Operational Variances. (8 Marks)

- (c) State the methods in which initial feasible solution can be arrived at in a transportation problem. (3 Marks)

2. A firm has developed a product for which the following standard cost estimates have been made for the first batch to be manufactured in Jan'12:

	₹
Direct Materials	5,500
(100 units @ ₹ 55 per unit)	
Direct Labour	4,000
(100 hours @ ₹ 40 per hour)	
Variable Overhead	
(100 hours @ ₹ 75 per hour)	<u>7,500</u>
	<u>17,000</u>

From experience the firm knows that labour will benefit from a learning effect and labour time will be reduced. This is expected to approximate to an 80% learning curve. In addition, the

growing expertise of labour is expected to improve the efficiency with which materials are used. The usage of materials is expected to approximate to a 95% learning curve.

The actual production for Jan'12 to Jun'12 was 320 batches. During Jun'12 following results were recorded for 320th batch made:

Direct Materials (80 units)	₹ 4,000
Direct Wages (20 hours)	₹ 1,000
Variable Overhead (20 hours)	₹ 1,800

You are required to calculate variances in connection with 320th batch.

[Note: Learning Coefficient is -0.322 and -0.074 for learning rate of 80% and 95% respectively, $\log 2=0.30103$, $\log 5=0.69897$, $\log 319=2.50379$, Antilog of 1.81462 =65.26, Antilog of 1.81472 =65.27, Antilog of 1.19334 =15.61, Antilog of 1.19378 =15.62]

(16 Marks)

3. The global construction company is bidding on a contract to install a line of microwave towers. It has identified the following activities, along with their expected times, predecessor restriction and worker requirements:

Activity	Duration (weeks)	Predecessors	Crew Size, Workers
A	8	—	8
B	14	—	4
C	6	A	4
D	6	A	8
E	4	B	12
F	4	B	6
G	4	D, E	6
H	6	F, G	8

The contract specifies that the project must be completed in 28 weeks. This company will assign a fixed number of workers to the project for its entire duration, and so it would like to ensure that the minimum number of workers is assigned and that the project will be completed in the 14 weeks. Find a schedule which will do this. (16 Marks)

4. (a) Fine Manufacturers Ltd. (FML) is specialist in the manufacturing of Industrial Products. They manufacture and market two types of products under the name 'X' and 'Y'. Company produces two products from three basic raw materials 'A', 'B', and 'C'. Company follows a 13-period reporting cycle for budgeting purpose. Each period is four weeks long and has 20 working days. Data relating to the purchase of raw materials are presented below:

Raw Material	Purchase Price (Per Kg)	Standard Purchase Lot (Kg)	Reorder Point (Kg)	Projected Inventory Status at the end of 5 th period (Kg)		Lead Time in Working Days
				On Hand	On Order	
A	₹ 1.00	90,000	72,000	96,000	90,000	10
B	₹ 2.00	30,000	45,000	54,000	-	30
C	₹ 1.00	60,000	60,000	84,000	60,000	20

Past experience has shown that adequate inventory levels for 'X' and 'Y' can be maintained if 40 percent of the next period's projected sales are on hand at the end of a reporting period. Other relevant information is as follows:

Product	Raw Material Specifications			Projected Inventory Levels	Projected Sales		
	A	B	C	At the end of current (5 th) period	6 th Period	7 th Period	8 th Period
	Kg	Kg	Kg	Units	Units	Units	Units
X	1.25	0.50	-	18,000	45,000	52,500	57,000
Y	2.00	-	1.50	16,800	42,000	27,000	24,000

The sales of 'X' and 'Y' do not vary significantly from month to month. Consequently, the safety stock incorporated into the reorder point for each of the raw materials is adequate to compensate for variations in the sales of the finished products.

Raw materials orders are placed the day the quantity on hand falls below the reorder point. FML's suppliers are very trustworthy so that the given lead times are reliable.

The outstanding orders for raw materials 'A' and 'C' are due to arrive on the 10th and 4th working day of the 6th period, respectively. Payments for all raw material orders are remitted by the 10th day of the delivery.

You are required to determine the following items for raw materials 'A', 'B', and 'C' for inclusion in the 6th period report to management:

1. Projected quantities (in Kg) to be issued to production.
2. Projected quantities (in Kg) ordered and the date (in terms of working days) the order is to be placed.
3. The projected inventory balance (in Kg) at the end of the period.

4. The payments for purchases with due date. (10 Marks)
- (b) In what circumstances it may be justifiable to sell at a price below marginal cost? (4 Marks)
- (c) Give two examples for batch level activities in activity based costing. (2 Marks)
5. (a) Fox-2-Tec Ltd (F2TL) has Division 'Dx' and Division 'Dz' with full profit responsibility. The Division 'Dx' produces Component 'X' which it sells to 'outside' customers only. The Division 'Dz' produces a product called the 'Z' which incorporates Component 'X' in its design. 'Dz' Division is currently purchasing 2,500 units of Component 'X' per year from an outside supplier at a cost of ₹ 35 per unit, less a 10 percent quantity discount. 'Dx' Division can sell its entire Component 'X' to outside customers at the normal ₹ 35 price. Costs associated with manufacturing of a unit of Component 'X' are as follows:
- | | |
|--|------|
| Variable Expenses | ₹ 21 |
| Fixed (based on a capacity of 25,000 units per year) | ₹ 9 |
- F2TL's new managing director agrees for internal transfer if an acceptable transfer price can be worked out. According, he requires solution of following questions:-
1. If the 'Dz' Division purchases 2,500 units of Component 'X' per year from the 'Dx' Division, what price should control the transfers? Why?
 2. Refer to your computations in (1). What is the lower limit and the upper limit for a transfer price? Is an upper limit relevant in this situation?
 3. If the 'Dx' Division meets the price that the 'Dz' Division is currently paying to its supplier and sells 2,500 units of Component 'X' to the 'Dz' Division each year, what will be the effect on the profits of the 'Dx' Division, the 'Dz' Division, and the company as a whole?
 4. If the intermediate market price for Component 'X' is ₹ 35 per unit, is there any reason why the 'Dx' Division should sell to the 'Dz' Division for less than ₹ 35? Explain. (8 Marks)
- (b) Give an appropriate cost unit for each of the following service sectors:
- (i) Hotel
 - (ii) School
 - (iii) Hospital
 - (iv) Computer Department (2 Marks)
- (c) Give two examples of non-relevant costs. (2 Marks)
- (d) Write a short note on 'Process Costing in Service Sector'. (2 Marks)

(e) What is simulation? (2 Marks)

6. (a) Golden Bird Airlines Ltd. operates its services under the brand 'Golden Bird'. The 'Golden Bird' route network spans prominent business metropolis as well as key leisure destinations across the Indian subcontinent. 'Golden Bird', a low-fare carrier launched with the objective of commoditizing air travel, offers airline seats at marginal premium to train fares across India.

Profits of the 'Golden Bird' have been decreasing for several years. In an effort to improve the company's performance, consideration is being given to dropping several flights that appear to be unprofitable.

Income statement for one such flight from 'New Delhi' to 'Leh' (GB - 022) is given below (per flight):

	₹
Ticket Revenue (175 seats x 60% Occupancy x ₹ 7,000 ticket price)	7,35,000
Less Variable Expenses (₹ 1,400 per person)	<u>1,47,000</u>
Contribution Margin	5,88,000
Less Flight Expenses:	₹
Salaries, Flight Crew	1,70,000
Salaries, Flight Assistants	31,500
Baggage Loading and Flight Preparation	63,000
Overnight Costs for Flight Crew and Assistants <i>at destination</i>	12,600
Fuel for Aircraft	2,38,000
Depreciation on Aircraft	49,000*
Liability Insurance	1,47,000
Flight Promotion	28,000
Hanger Parking Fee for Aircraft <i>at destination</i>	<u>7,000</u>
Net Gain / (Loss)	<u>(1,58,100)</u>

* Based on obsolescence

The following additional information is available about flight GB-022.

- Members of the flight crew are paid fixed annual salaries, whereas the flight assistants are paid by the flight.
- The baggage loading and flight preparation expense is an allocation of ground crew's salaries and depreciation of ground equipment.
- One third of the liability insurance is a special charge assessed against flight

GB-022 because in the opinion of insurance company, the destination of the flight is in a “high-risk” area.

4. The hanger parking fee is a standard fee charged for aircraft at all airports.
5. If flight GB-022 is dropped, ‘Golden Bird’ Airlines has no authorization at present to replace it with another flight.

Required

Using the data available, prepare an analysis showing what impact dropping flight GB-022 would have on the airline's profit. (8 Marks)

- (b) An organization producing 4 different products, viz., WW, WX, WY, and WZ having 4 operators, viz., A,B, C and D who are capable of producing any of the four products, works effectively 7 hours a day. The time (in minutes) required for each operator for producing each of the products are given in the cells of the following matrix along with profit (₹ per unit):

Operator	Product			
	WW	WX	WY	WZ
A	3.0	5.0	7.0	6.0
B	3.5	2.5	1.5	2.0
C	3.0	3.5	5.0	5.0
D	10.0	5.0	7.5	7.5
Profit	1.5	1.0	2.0	0.5

Find out the assignment of operators to product which will maximize the profit.

(8 Marks)

7. Answer any four out of the following five subdivisions:
 - (a) What are the requisites for the installation of a uniform costing system? (4 Marks)
 - (b) What is divestment strategy? Highlight the main reasons for divestments. (4 Marks)
 - (c) Why are conventional product costing systems more likely to distort product costs in highly automated plants? How do activity-based costing systems deal with such a situation? (4 Marks)
 - (d) Explain ‘Multinational Transfer Pricing’. (4 Marks)
 - (e) How has the composition of manufacturing costs changed during recent years? How has this change affected the design of cost accounting systems? (4 Marks)