

Test Series: October, 2018

MOCK TEST PAPER – 2

INTERMEDIATE (NEW): GROUP – I

PAPER – 3: COST AND MANAGEMENT ACCOUNTING

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answer in Hindi will not be valued.

Question No. 1 is compulsory.

Attempt any **four** questions from the remaining **five** questions.

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

1. Answer the following:

- (a) Arnav Ltd. is producing a single product, has the profit-volume ratio of 40%. The company wishes to increase the selling price by 10% which will increase the variable cost by 5%. The fixed overheads will increase from its present level of Rs.20,00,000 to Rs.30,00,000.

Required:

- (i) COMPUTE the company's original break-even point sales and the break-even point sales after the increase.
- (ii) ESTIMATE the sales value for the firm to make a profit of Rs. 4,50,000 after the increase.
- (b) A company manufactures a product from a raw material, which is purchased at Rs. 54 per kg. The company incurs a handling cost of Rs.1,500 plus freight of Rs.4,000 per order. The incremental carrying cost of inventory of raw material is Rs.1.50 per kg per month. In addition, the cost of working capital finance on the investment in inventory of raw material is Rs.8 per kg per annum. The annual production of the product is 96,000 units and 4 units are obtained from one kg of raw material.

Required:

- (i) CALCULATE the economic order quantity of raw materials.
- (ii) ADVISE, how frequently orders should be placed for procurement.
- (iii) If the company proposes to rationalize placement of orders on quarterly basis, DETERMINE what percentage of discount in the price of raw materials should be negotiated?
- (c) RST Company Ltd. has computed labour turnover rates for the quarter ended 31st March, 2017 as 20%, 10% and 5% under flux method, replacement method and separation method respectively. If the number of workers replaced during that quarter is 50,

CALCULATE

- (i) Workers recruited and joined
- (ii) Workers left and discharged and
- (iii) Average number of workers on roll.
- (d) M/s. KBC Bearings Ltd. is committed to supply 48,000 bearings per annum to M/s. KMR Fans on a steady daily basis. It is estimated that it costs Rs. 1 as inventory holding cost per bearing per month and that the set up cost per run of bearing manufacture is Rs. 3,200
- (i) DETERMINE what would be the optimum run size of bearing manufacture?
- (ii) DETERMINE What would be the interval between two consecutive optimum runs?
- (iii) CALCULATE the minimum inventory cost? **(5 × 4 = 20 Marks)**

2. (a) Arnav Ltd. manufactures a product Q, the standard cost of which is as follows:

	Standard Cost per unit (Rs.)
Direct Material	600
Direct labour:	
- Skilled @ Rs.80 per hour	120
- Unskilled @ Rs.60 per hour	90
Variable overheads	75
Fixed overheads	30
	915

During the month just ended 4,000 units of Q were produced. The actual labour cost was as follows.

	Rate per hour (Rs.)	Cost (Rs.)
Skilled	87.50	5,77,500
Unskilled	55.00	2,97,000

10% of the labour time was lost due to idle time. The standard idle time was 7.5% of labour time. Arnav Ltd. has budgeted to produce 4,200 units of Q. Arnav Ltd. absorbs its overheads on direct labour hour (effective hours) basis. Actual fixed and variable overheads incurred were Rs.1,55,000 and Rs.2,85,000 respectively.

CALCULATE:

- (i) Labour rate variance;
- (ii) Labour efficiency variance;
- (iii) Labour mix variance;
- (iv) Labour yield variance;
- (v) Labour idle time variance;
- (vi) Variable overhead expenditure variance and
- (vii) Variable overhead efficiency variance.

(10 Marks)

- (b) The following information have been extracted from the cost records of JKL Manufacturing Company Ltd:

	Rs.
Stores:	
Opening Balance	90,000
Purchases	4,80,000
Transfer from WIP	2,40,000
Issue to WIP	4,80,000
Issue for repairs	60,000
Deficiency found in stock	18,000
Work-in-Process:	
Opening Balance	1,80,000
Direct wages applied	1,80,000
Overhead charged	7,20,000
Closing Balance	1,20,000

Finished Production:	
Entire production is sold at a profit of 10% on cost from work-in-progress	-
Wages Paid	2,10,000
Overhead Incurred	7,50,000

PREPARE Stores Ledger Control A/c., Work-in-Process Control A/c., Overheads Control A/c. and Costing Profit & Loss A/c. **(10 Marks)**

3. (a) DKG Airlines owns single passenger aircraft and operates between Melbourne and Delhi only. Flight leaves Melbourne on Monday and Thursday and departs from Delhi on Wednesday and Saturday. DKG Airlines cannot afford any more flight between Melbourne and Delhi. Only economical class seats are available on its flight and all tickets are booked by travel agents. The following information are collected.

Seating capacity per plane	360
Average passengers per flight	250
Flights per week	4
Flights per year	208
Average one-way fare	Rs.50,000
Variable fuel cost	Rs.28,00,000 per flight
Food service to passengers (not charged to Passengers)	Rs.2,600 per passenger
Commission to travel agents	15% of fare
Fixed annual lease cost allocated to each flight	Rs. 15,30,000 per flight
Fixed ground services (maintenance, check in, Baggage handling cost) allocated to each flight	Rs.1,70,000 per flight
Fixed salaries of flight crew allocated to each flight	Rs.6,50,000 per flight

For the sake of simplicity assume that fuel cost is unaffected by the actual number of passengers on a flight.

Required:

- (i) CALCULATE the operating income that DKG Airlines makes on each way flight between Melbourne and Delhi?
- (ii) The market research department of DKG Airlines indicates that lowering the average one-way fare to Rs. 48,000 and increase in agents' commission to 17.5% will increase the average number of passenger per flight to 275. DECIDE whether DKG Airlines should lower its fare or not? **(10 Marks)**
- (b) You are given the following information of the three machines of a manufacturing department of X Ltd.:

	Preliminary estimates of expenses (per annum)			
	Total (Rs.)	Machines		
		A (Rs.)	B (Rs.)	C (Rs.)
Depreciation	20,000	7,500	7,500	5,000
Spare parts	10,000	4,000	4,000	2,000
Power	40,000			
Consumable stores	8,000	3,000	2,500	2,500
Insurance of machinery	8,000			

Indirect employee cost	20,000			
Building maintenance expenses	20,000			
Annual interest on capital outlay	50,000	20,000	20,000	10,000
Monthly charge for rent and rates	10,000			
Salary of foreman (per month)	20,000			
Salary of Attendant (per month)	5,000			

(The foreman and attendant control all the three machines and spend equal time on each of them.)

The following additional information is also available:

	Machines		
	A	B	C
Estimated Direct Labour Hours	1,00,000	1,50,000	1,50,000
Ratio of K.W. Rating	3	2	3
Floor space (sq. ft.)	40,000	40,000	20,000

There are 12 holidays besides Sundays in the year, of which two were on Saturdays. The manufacturing department works 8 hours in a day but Saturdays are half days. All machines work at 90% capacity throughout the year and 2% is reasonable for breakdown.

You are required to:

CALCULATE predetermined machine hour rates for the above machines after taking into consideration the following factors:

- An increase of 15% in the price of spare parts.
- An increase of 25% in the consumption of spare parts for machine 'B' & 'C' only.
- 20% general increase in wages rates. **(10 Marks)**

4. (a) The following information relate to Process A:

(i) Opening Work-in-Process	8,000 units at Rs.15,00,000
Degree of Completion: Material	100%
Labour and Overhead	60%
(ii) Input 1,82,000 units at	Rs.1,47,50,000
(iii) Wages paid	Rs.68,12,000
(iv) Overheads paid	Rs.34,06,000
(v) Units scrapped	14,000
Degree of Completion: Material	100%
Wages and Overheads	80%
(vi) Closing Work - in- Process	18,000 units
Degree of Completion: Material	100%
Wages and Overheads	70%
(vii) Units completed and transferred to next process	1,58,000 units
(viii) Normal loss 10% of total input including opening WIP	
(ix) Scrap value is Rs.15 per unit to be adjusted out of direct material cost	

You are required to COMPUTE on the basis of FIFO

- (i) Equivalent Production
- (ii) Cost per unit
- (iii) Value of units transferred to next process. **(10 Marks)**

(b) Arnava Motors Ltd. manufactures pistons used in car engines. As per the study conducted by the Auto Parts Manufacturers Association, there will be a demand of 80 million pistons in the coming year. Arnava Motors Ltd. is expected to have a market share of 1.15% of the total market demand of the pistons in the coming year. It is estimated that it costs Rs.1.50 as inventory holding cost per piston per month and that the set-up cost per run of piston manufacture is Rs. 3,500.

- (i) DETERMINE the optimum run size for piston manufacturing?
- (ii) Assuming that the company has a policy of manufacturing 40,000 pistons per run, CALCULATE the extra costs company would be incurring as compared to the optimum run suggested in (i) above?
- (iii) IDENTIFY variability of cost with respect to unit and batch level from the following cost:
 - (a) Inventory carrying cost; (b) Designing cost for a job; (c) Machine set-up cost to run production and (d) Depreciation of factory building. **(10 Marks)**

5. (a) C Ltd. manufactures two products using two types of materials and one grade of labour. Shown below is an extract from the company's working papers for the next month's budget:

	Product-A	Product-B
Budgeted sales (in units)	2,400	3,600
Budgeted material consumption per unit (in kg):		
Material-X	5	3
Material-Y	4	6
Standard labour hours allowed per unit of product	3	5

Material-X and Material-Y cost Rs. 4 and Rs. 6 per kg and labours are paid Rs. 25 per hour. Overtime premium is 50% and is paid, if a worker works for more than 40 hours a week. There are 180 direct workers.

The target productivity ratio (or efficiency ratio) for the productive hours worked by the direct workers in actually manufacturing the products is 80%. In addition, the non-productive down-time is budgeted at 20% of the productive hours worked.

There are four 5-days weeks in the budgeted period and it is anticipated that sales and production will occur evenly throughout the whole period.

It is anticipated that stock at the beginning of the period will be:

Product-A	400 units
Product-B	200 units
Material-X	1,000 kg.
Material-Y	500 kg.

The anticipated closing stocks for budget period are as below:

Product-A	4 days sales
Product-B	5 days sales
Material-X	10 days consumption
Material-Y	6 days consumption

Required:

CALCULATE the Material Purchase Budget and the Wages Budget for the direct workers, showing the quantities and values, for the next month. **(10 Marks)**

- (b) Woolmark Ltd. manufactures three types of products namely P, Q and R. The data relating to a period are as under:

Particulars	P	Q	R
Machine hours per unit	10	18	14
Direct Labour hours per unit @ Rs. 20	4	12	8
Direct Material per unit (Rs.)	90	80	120
Production (units)	3,000	5,000	20,000

Currently the company uses traditional costing method and absorbs all production overheads on the basis of machine hours. The machine hour rate of overheads is Rs. 6 per hour.

The company proposes to use activity based costing system and the activity analysis is as under:

Particulars	P	Q	R
Batch size (units)	150	500	1,000
Number of purchase orders per batch	3	10	8
Number of inspections per batch	5	4	3

The total production overheads are analysed as under:

Machine set up costs	20%
Machine operation costs	30%
Inspection costs	40%
Material procurement related costs	10%

Required:

- (i) CALCULATE the cost per unit of each product using traditional method of absorbing all production overheads on the basis of machine hours.
 (ii) CALCULATE the cost per unit of each product using activity based costing principles.

(10 Marks)

6. (a) STATE the limitations of cost and management accounting.
 (b) DISCUSS with example the level of activity method of segregating semi-variable costs into fixed and variable costs.
 (c) STATE the advantages of Cost-Sheets
 (d) EXPLAIN the difference between Allocation and Apportionment of expenses. **(4 × 5 =20 Marks)**