

Question No. 1 is compulsory.

Attempt any **four** questions out of the remaining **five** questions.

In case, any candidate answers extra question(s)/ sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.

Working notes should form part of the answer

**QUESTION 1(A)**

Following data have been extracted from the books of M/s. ABC Private Limited:

(i)	Salary (each employee, per month)	Rs. 30,000
(ii)	Bonus	25% of salary
(iii)	Employer's contribution to PF, ESI etc.	15% of salary
(iv)	Total cost at employees' welfare activities	Rs. 6,61,500 per annum
(v)	Total leave permitted during the year	30 days
(v)	No. of employees	175
(vii)	Normal idle time	70 hours per annum
(viii)	Abnormal idle time (due to failure of power supply)	50 hours
(ix)	Working days per annum	310 days of 8 hours

You are required to calculate:

1. Annual cost of each employee
2. Employee cost per hour
3. Cost of abnormal idle time, per employee

**(5 Marks)**

**QUESTION 1(B)**

Beta Ltd. is manufacturing Product N. This is manufactured by mixing two materials namely Material P and Material Q. The Standard Cost of Mixture is as under :

Material P 150 ltrs. @ Rs. 40 per Ltr.

Material Q 100 ltrs. @ Rs. 60 per ltr.

Standard loss @ 20 of total input is expected during production.

The cost records for the period exhibit following consumption :

Material P 140 ltrs. @ Rs. 42 per ltr,

Material Q 110 ltrs. @ Rs. 56 per ltr.

Quantity produced was 195 ltrs.

**Calculate :**

- (i) Material Cost Variance
- (ii) Material Usage Variance
- (iii) Material Price Variance

**(5 Marks)**

**QUESTION 1(C)**

A Factory produces two products, 'A' and 'B' from a single process. The joint processing costs during a particular month are :

Direct Material	Rs.30,000
Direct Labour	Rs. 9,600
Variable Overheads	Rs. 12,000
Fixed Overheads	Rs. 32,000

Sales: A- 100 units@ Rs. 600 per unit; B – 120 units @ Rs. 200 per unit.

- I. Apportion joints costs on the basis of:
  - (i) Physical Quantity of each product.
  - (ii) Contribution Margin method, and
- II. Determine Profit or Loss under both the methods.

**(5 Marks)**

**QUESTION 1(D)**

Following is the sales budget for the first six months of the year 2014 in respect of PQR Ltd. :

Month :	Jan.	Feb.	March	April	May	June
Sales (units) :	10,000	12,000	14,000	15,000	15,000	16,000

Finished goods inventory at the end of each month is expected to be 20% of budgeted sales quantity for the following month. Finished goods inventory was 2,700 units on January 1, 2014. There would be no work-in-progress at the end of any month.

Each unit of finished product requires two types of materials as detailed below:

Material X : 4 kg. @ Rs. 10/kg

Material Y : 6 kg. @ Rs. 15/kg

Material on hand on January 1, 2014 was 19,000 kg. of material X and 29,000 kg. of material Y. Monthly closing stock of material is budgeted to be equal to half of the requirements of next month's production.

Budgeted direct labour hour per unit of finished product is  $\frac{3}{4}$  hour.

Budgeted direct labour cost for the first quarter of the year 2014 is Rs. 10,89,000.

Actual data for the quarter one, ended on March 31, 2014 is as under:

Actual production quantity : 40,000 units

Direct material cost

(Purchase cost based on materials actually issued to production)

Material X : 1,65,000 kg. @ Rs. 10.20 / kg.

Material Y : 2,38,000 kg. @ Rs. 15.10/ kg.

Actual direct labour hours worked : 32,000 hours

Actual direct labour cost : Rs. 13,12,000

Required :Prepare the following budgets:

- (i) Monthly production quantity for the quarter one.
- (ii) Monthly raw material consumption quantity budget from January, 2014 to April, 2014.
- (iii) Materials purchase quantity budget for the quarter one. **(5 Marks)**

#### QUESTION 2(A)

A manufacturing company is producing a product 'A' which is sold in the market at Rs.45 per unit. The company has the capacity to produce 40000 units per year. The budget for the year 2018-19 projects a sale of 30000 units.

The costs of each unit are expected as under:

	Rs.
Materials	12
Wages	9
Overheads	6

Margin of safety is Rs. 4,12,500.

You are required to:

- (i) calculate fixed cost and break-even point.
- (ii) calculate the volume of sales to earn profit of 20% on sales.
- (iii) if management is willing to invest Rs. 10,00,000 with an expected return of 20%, calculate units to be sold to earn this profit.
- (iv) Management expects additional sales if the selling price is reduced to Rs. 44. Calculate units to be sold to achieve the same profit as desired in above (iii).

**(10 Marks)**

#### QUESTION 2(B)

A hotel is being run in a Hill station with 200 single rooms. The hotel offers concessional rates during six off-season months in a year.

During this period, half of the full room rent is charged. The management's profit margin is targeted at 20% of the room rent. The following are the cost estimates and other details for the year ending 31<sup>st</sup> March ,2019:

- (i) Occupancy during the season is 80% while in the off-season it is 40%.

- (ii) Total investment in the hotel is Rs. 300 lakhs of which 80% relates to Buildings and the balance to Furniture and other Equipment.
- (iii) Room attendants are paid Rs. 15 per room per day on the basis of occupancy of rooms in a month.
- (iv) Expenses:
- Staff salary (excluding that of room attendants) Rs. 8,00,000
  - Repairs to Buildings Rs. 3,00,000
  - Laundry Charges Rs. 1,40,000
  - Interior Charges Rs. 2,50,000
  - Miscellaneous Expenses Rs. 2,00,200
- (v) Annual Depreciation is to be provided on Buildings @ 5% and 15% on Furniture and other Equipments on straight line method.
- (vi) Monthly lighting charges are Rs. 110, except in four months in winter when it is Rs. 30 per room and this cost is on the basis of full occupancy for a month.

You are required to workout the room rent chargeable per day both during the season and the off-season months using the foregoing information.

(Assume a month to be of 30 days and winter season to be considered as part of off-season). **(10 Marks)**

### QUESTION 3(A)

M/s Areeba Private Limited has a normal production capacity of 36,000 units of toys per annum. The estimated costs of production are as under:

- (i) Direct Material Rs. 40 per unit
- (ii) Direct Labour Rs. 30 per unit (subject to a minimum of Rs. 48,000 p.m.)
- (iii) Factory Overheads:
- (a) Fixed Rs. 3,60,000 per annum
  - (b) Variable Rs. 10 per unit
  - (c) Semi-variable Rs. 1,08,000 per annum up to 50% capacity and additional Rs. 46,800 for every 20% increase in capacity or any part thereof.
- (iv) Administrative Overheads Rs. 5, 18,400 per annum (fixed)
- (v) Selling overheads are incurred at Rs. 8 per unit.
- (vi) Each unit of raw material yields scrap which is sold at the rate of Rs. 5 per unit.
- (vii) In year 2019, the factory worked at 50% capacity for the first three months but it was expected that it would work at 80% capacity for the remaining nine months.
- (viii) During the first three months, the selling price per unit was Rs. 145.

You are required to:

- (i) Prepare a cost sheet showing Prime Cost, Works Cost, Cost of Production and Cost of Sales.
- (ii) Calculate the selling price per unit for remaining nine months to achieve the total annual profit of Rs. 8,76,600. **(10 Marks)**

**QUESTION 3(B)**

A product passes through two distinct processes before completion.

Following information are available in this respect :

	Process-1	Process-2
Raw materials used	10,000 units	-
Raw material cost (per unit)	Rs. 75	-
Transfer to next process/Finished good	9,000 units	8,200 units
Normal loss (on inputs)	5%	10%
Direct wages	Rs. 3,00,000	Rs. 5,60,000
Direct expenses	50% of direct wages	65% of direct wages
Manufacturing overheads	25% of direct wages	15% of direct wages
Realisable value of scrap (per unit)	Rs. 13.50	Rs. 145

8,000 units of finished goods were sold at a profit of 15% on cost. There was no opening and closing stock of work-in-progress.

Prepare:

- (i) Process-1 and Process-2 Account
- (ii) Finished goods Account
- (iii) Normal Loss Account
- (iv) Abnormal Loss Account
- (v) Abnormal Gain Account.

**(10 Marks)**

**QUESTION 4(A)**

M/s. Bansals Construction Company Ltd. took a contract for Rs. 60,00,000 expected to be completed in three years. The following particulars relating to the contract are available :

	20X7 (Rs.)	20X8 (Rs.)	20X9 (Rs.)
Materials	6,75,000	10,50,000	9,00,000
Wages	6,20,000	9,00,000	7,50,000
Transportation cost	30,000	90,000	75,000
Other expenses	30,000	75,000	24,000
Cumulative work certified	13,50,000	45,00,000	60,00,000
work uncertified	15,000	75,000	---

Plant costing Rs. 3,00,000 was bought at the commencement of the contract. Depreciation was to be charged at 25% per annum, on the written down value method. The contractee pays 75% of the value of work certified as and when certified, and makes the final payment of completion of the contract.

You are required to PREPARE a contract account for three years.

**(10 Marks)**

**QUESTION 4(B)**

MNO Ltd. manufactures two types of equipment A and B and absorbs overheads on the basis of direct labour hours. The budgeted overheads and direct labour hours for the month of March 2019 are Rs. 15,00,000 and 25,000 hours respectively. The information about the company's products is as follows:

	Equipment	
	A	B
Budgeted Production Volume	3,200 units	3,850 units
Direct Material Cost	Rs. 350 per unit	Rs. 400 per unit
Direct Labour Cost		
A: 3 hours @ Rs. 120 per hour	Rs. 360	
B: 4 hours @ Rs. 120 per hour		Rs. 480

Overheads of Rs. 15,00,000 can be identified with the following three major activities:

Order Processing:	Rs. 3,00,000
Machine Processing:	Rs. 10,00,000
Product Inspection:	Rs. 2,00,000

These activities are driven by the number of orders processed, machine hours worked and inspection hours respectively. The data relevant to these activities is as follows:

	Orders processed	Machine hours worked	Inspection hours
A	400	22,500	5,000
B	200	27,500	15,000
Total	600	50,000	20,000

Required:

- (i) Prepare a statement showing the manufacturing cost per unit of each product using the absorption costing method assuming the budgeted manufacturing volume is attained.
- (ii) Determine cost driver rates and prepare a statement showing the manufacturing cost per unit of each product using activity based costing, assuming the budgeted manufacturing volume is attained.
- (iii) MNO Ltd.'s selling prices are based heavily on cost. By using direct labour hours as an application base, calculate the amount of cost distortion (under costed or over costed) for each equipment. **(10 Marks)**

**QUESTION 5(A)**

A company can make any one of the 3 products X, Y or Z in a year. It can exercise its option only at the beginning of each year.

Relevant information about the products for the next year is given below

	X	Y	Z
Selling Price (Rs. / unit)	100	120	120
Variable Costs (Rs. / unit)	60	90	70
Market Demand (unit)	3,000	2,000	1,000
Production Capacity (unit)	2,000	3,000	900
Fixed Costs (Rs.)	3,00,000		

Required: Compute the opportunity costs for each of the products. **(5 Marks)**

#### QUESTION 5(B)

M/s Zaina Private Limited has purchased a machine costing Rs. 29,14,800 and it is expected to have a salvage value of Rs. 1,50,000 at the end of its effective life of 15 years. Ordinarily the machine is expected to run for 4,500 hours per annum but it is estimated that 300 hours per annum will be lost for normal repair & maintenance. The other details in respect of the machine are as follows :

- (i) Repair & Maintenance during the whole life of the machine are expected to be Rs. 5,40,000.
- (ii) Insurance premium (per annum) 2% of the cost of the machine.
- (iii) Oil and Lubricants required for operating the machine (per annum) Rs. 87,384.
- (iv) Power consumptions: 10 units per hour @ Rs. 7 per unit. No power consumption during repair and maintenance.
- (v) Salary to operator per month Rs. 24,000. The operator devotes one third of his time to the machine.

You are required to calculate comprehensive machine hour rate. **(5 Marks)**

#### QUESTION 5(C)

The following are the details of receipt and issue of material 'CXE' in a manufacturing Co. during the month of April 2019:

Date	Particulars	Quantity (kg)	Rate per kg
April 4	Purchase	3,000	Rs. 16
April 8	Issue	1,000	
April 15	Purchase	1,500	Rs. 18
April 20	Issue	1,200	
April 25	Return to supplier out of purchase made on April 15	300	
April 26	Issue	1,000	
April 28	Purchase	500	Rs. 17

Opening stock as on 01-04-2019 is 1,000 kg @ Rs. 15 per kg.

On 30<sup>th</sup> April, 2019 it was found that 50 kg of material 'CXE' was fraudulently misappropriated by the store assistant and never recovered by the Company.

