

**Question No. 1 is compulsory and attempt any four out of remaining five questions.**

**NOTES: (1) WORKING NOTES SHOULD FORM PART OF ANSWERS.**

**(2) NEW QUESTION SHOULD BE ON NEW PAGE**

**QUESTION NO.1**

**(5\*4 = 20 MARKS)**

A. Following details are related to a manufacturing concern:

Re-order Level	16,000 units
Economic Order Quantity	90,000
Minimum Stock Level	100000 units
Maximum Stock Level	190000 units
Average Lead Time	6 days
Difference between minimum lead time and Maximum lead time	4 days

**Calculate:**

- (i) Maximum consumption per day
- (ii) Minimum consumption per day

B. M/s Abid Private Limited disclosed a net profit of Rs. 48,408 as per cost books for the year ending 31<sup>st</sup> March 2019. However, financial accounts disclosed net loss of Rs. 15,000 for the same period. On scrutinizing both the set of books of accounts, the following information was revealed:

Works Overheads under-recovered in Cost Books	48,600
Office Overheads over-recovered in Cost Books	11,500
Dividend received on Shares	17,475
Interest on Fixed Deposits	21,650
Provision for doubtful debts	17,800
Obsolescence loss not charged in Cost Accounts	17,200
Stores adjustments (debited in Financial Accounts)	35,433
Depreciation charged in financial accounts	30,000
Depreciation recovered in Cost Books	35,000

**Prepare a Memorandum Reconciliation Account.**

- C. A manufacturing company has added a new machine to its fleet of eleven existing machines. New machine is purchased for Rs. 12,70,000 with installation cost of Rs. 40,000. The machine has an estimated life of 10 years and is expected to realise Rs. 90,000 as scrap at the end of its useful life. Other relevant data are as follows:
- (i) Budgeted annual working hours are 2,400 based on 8 hours per day for 300 days. This includes 180 hours for plant maintenance and 120 hours of productive set-up time.
  - (ii) Electricity used by the new machine is 12 units per hour at a cost of Rs. 6.50 per unit. No current is drawn during maintenance and setup.
  - (iii) Three operators control the operations of all the twelve machines and average rate of wages per operator per day is Rs. 600 and production bonus is 10% of wages.
  - (iv) Annual insurance premium for the new machine is Rs.12,600.
  - (v) Annual maintenance cost of new machine including consumable stores is Rs. 32,500.
  - (vi) Rent of the factory is Rs. 24,000 per month. Area occupied by new machine 200 sq ft. and area occupied by other machines is 2800 sq ft.

**Required: Compute the comprehensive machine hour rate.**

- D. **Calculate the earnings of A and B** from the following particulars for a month and allocate the labour cost to each job X, Y and Z:

	A	B
(i) Basic Wages	Rs. 100	Rs. 160
(ii) Dearness Allowance	50%	50%
(iii) Contribution to provident Fund (on basic wages)	8%	8%
(iv) Contribution to Employees' State Insurance (on basic wages)	2%	2%
(v) Overtime	10 hours	

The normal working hours for the month are 200. Overtime is paid at double the total of normal wages and dearness allowance. Employer's contribution to state Insurance and Provident Fund are at equal rate with employees' contributions. The two workers were employed on jobs X, Y and Z in the following proportions:

	Jobs		
	X	Y	Z
Worker A	40%	30%	30%
Worker B	50%	20%	30%

Overtime was done on job Y.

**QUESTION NO.2****(10\*2 = 20 MARKS)**A. From the following data of Arnav Metallic Ltd., **CALCULATE Cost of production:**

		Amount (Rs.)
(i)	Repair & maintenance paid for plant & machinery	9,80,500
(ii)	Insurance premium paid for plant & machinery	96,000
(iii)	Raw materials purchased	64,00,000
(iv)	Opening stock of raw materials	2,88,000
(v)	Closing stock of raw materials	4,46,000
(vi)	Wages paid	23,20,000
(vii)	Value of opening Work-in-process	4,06,000
(viii)	Value of closing Work-in-process	6,02,100
(ix)	Quality control cost for the products in manufacturing process	86,000
(x)	Research & development cost for improvement in production process	92,600
(xi)	Administrative cost for:	
	- Factory & production	9,00,000
	- Others	11,60,000
(xii)	Amount realised by selling scrap generated during the manufacturing process	9,200
(xiii)	Packing cost necessary to preserve the goods for further processing	10,200
(xiv)	Salary paid to Director (Technical)	8,90,000

B. V Ltd. produces and markets a very popular product called 'X'. The company is interested in presenting its budget for the second quarter of 2019. The following information are made available for this purpose:

- (i) It expects to sell 50,000 bags of 'X' during the second quarter of 2019 at the selling price of Rs. 900 per bag.
- (ii) Each bag of 'X' requires 2.5 kgs. of a raw – material called 'Y' and 7.5 kgs. of raw – material called 'Z'.
- (iii) Stock levels are planned as follows:

Particulars	Beginning of Quarter	End of Quarter
Finished Bags of 'X' (Nos.)	15,000	11,000
Raw – Material 'Y' (Kgs.)	32,000	26,000
Raw – Material 'Z' (Kgs.)	57,000	47,000
Empty Bag (Nos.)	37,000	28,000

- (iv) 'Y' cost Rs.120 per Kg., 'Z' costs Rs.20 per Kg. and 'Empty Bag' costs Rs.80 each.

- (v) It requires 9 minutes of direct labour to produce and fill one bag of 'X'. Labour cost is Rs.50 per hour.
- (vi) Variable manufacturing costs are Rs.45 per bag. Fixed manufacturing costs Rs.30,00,000 per quarter.
- (vii) Variable selling and administration expenses are 5% of sales and fixed administration and selling expenses are Rs.20,50,000 per quarter.

**Required**

- (i) PREPARE a production budget for the said quarter.
- (ii) PREPARE a raw – material purchase budget for 'Y', 'Z' and 'Empty Bags' for the said quarter in quantity as well as in rupees.
- (iii) COMPUTE the budgeted variable cost to produce one bag of 'X'.
- (iv) PREPARE a statement of budgeted net income for the said quarter and show both per unit and total cost data.

**QUESTION NO.3**

**(10\*2 = 20 MARKS)**

A. Star Ltd. manufactures chemical solutions for the food processing industry. The manufacturing takes place in a number of processes and the company uses FIFO method to value work-in-process and finished goods. At the end of the last month, a fire occurred in the factory and destroyed some of papers containing records of the process operations for the month.

Star Ltd. needs your help to prepare the process accounts for the month during which the fire occurred. You have been able to gather some information about the month's operating activities but some of the information could not be retrieved due to the damage. The following information was salvaged:

- Opening work-in-process at the beginning of the month was 1,600 litres, 70% complete for labour and 60% complete for overheads. Opening work-in-process was valued at Rs. 1,06,560.
- Closing work-in-process at the end of the month was 320 litres, 30% complete for labour and 20% complete for overheads.
- Normal loss is 10% of input and total losses during the month were 1,200 litres partly due to the fire damage.
- Output sent to finished goods warehouse was 8,400 litres.
- Losses have a scrap value of Rs.15 per litre.
- All raw materials are added at the commencement of the process.
- The cost per equivalent unit (litre) is Rs.78 for the month made up as follows:

	(Rs.)
Raw Material	46
Labour	14
Overheads	18
	78

**Required:**

- (i) CALCULATE the quantity (in litres) of raw material inputs during the month.
- (ii) CALCULATE the quantity (in litres) of normal loss expected from the process and the quantity (in litres) of abnormal loss / gain experienced in the month.
- (iii) CALCULATE the values of raw material, labour and overheads added to the process during the month.
- (iv) PREPARE the process account for the month.

B. Following are the data of three product lines of a departmental store for the year 2019-20:

	Soft drinks	Fresh produce	Packaged food
Revenues	Rs. 39,67,500	Rs. 1,05,03,000	Rs. 60,49,500
Cost of goods sold	Rs. 30,00,000	Rs. 75,00,000	Rs. 45,00,000
Cost of bottles returned	Rs. 60,000	Rs. 0	Rs. 0
Number of purchase orders placed	360	840	360
Number of deliveries received	300	2,190	660
Hours of shelf-stocking time	540	5,400	2,700
Items sold	1,26,000	11,04,000	3,06,000

Additional information related with the store are as follows:

Activity	Description of activity	Total Cost	Cost-allocation base
Bottles returns	Returning of empty bottles	Rs. 60,000	Direct tracing to soft drink line
Ordering	Placing of orders for purchases	Rs. 7,80,000	1,560 purchase orders
Delivery	Physical delivery and receipt of goods	Rs. 12,60,000	3,150 deliveries
Shelf stocking	Stocking of goods on store shelves and on-going restocking	Rs. 8,64,000	8,640 hours of shelf-stocking time
Customer Support	Assistance provided to customers including check-out	Rs. 15,36,000	15,36,000 items sold

**Required:**

CALCULATE the total cost and operating income using Activity Based Costing method.

**QUESTION NO.4**

**(10\*2 = 20 MARKS)**

A. Following are the information given by owner of M/s Moonlight Co. running a hotel at Manali. **You are requested to advise him regarding the rent to be charged from his customer per day so that he is able to earn 20% profit on cost other than interest.**

- (i) Staff salaries Rs. 4,00,000.
- (ii) The Room Attendant's salary is Rs. 10 per day. The salary is paid on daily basis and the services of room attendant are needed only when the room is occupied. There is one room attendant for one room.
- (iii) Lighting, Heating and Power:
  - (a) The normal lighting expenses for a room if it is occupied for the whole month is Rs. 250.
  - (b) Power is used only in winter and normal charge per month if occupied for a room is Rs. 100.
- (iv) Repairs to Building Rs. 50,000 per annum.
- (v) Linen etc. Rs. 24,000 per annum.
- (vi) Sundries Rs. 70,770 per annum.
- (vii) Interior decoration and furnishing Rs. 50,000 per annum.
- (viii) Cost of Building Rs. 20,00,000, rate of depreciation 5%
- (ix) Other Equipment Rs. 5,00,000, rate of depreciation 10%
- (x) Interest @ 5% may be charged on its investment of Rs. 25,00,000 in the building and equipment.
- (xi) There are 200 rooms in the hotel and 90% of the rooms are normally occupied in summer and 40% of the rooms are occupied in winter. You may assume that period of summer and winter is six months each. Normal days in a month may be assumed to be 30.

B. A factory uses job costing system. The following data are obtained from its books for the year ended 31<sup>st</sup> March, 2020:

	<b>Amount (Rs.)</b>
Direct materials	18,00,000
Direct wages	15,00,000
Selling and distribution overheads	10,50,000
Administration overheads	8,40,000
Factory overheads	9,00,000
Profit	12,18,000

(i) **PREPARE a Job Cost** sheet indicating the Prime cost, Cost of Production, Cost of sales and the Sales value.

(ii) In 2019-20, the factory received an order for a job. It is estimated that direct materials required will be Rs.4,80,000 and direct labour will cost Rs.3,00,000. **DETERMINE what should be the price for the job** if factory intends to earn the same rate of profit on sales assuming that the selling and distribution overheads have gone up by 15%. The factory overheads is recovered as percentage of wages paid, whereas, other overheads as a percentage of cost of production, based on cost rates prevailing in the previous year.

**QUESTION NO.5**

**(10\*2 = 20 MARKS)**

A. SJ Ltd. has furnished the following information:

Standard overhead absorption rate per unit	Rs. 20
Standard rate per hour	Rs. 4
Budgeted production	15,000 units
Actual production	15,560 units
Actual overheads were Rs. 2,95,000 out of which Rs. 62,500 fixed . Actual hours	74,000

Overheads are based on the following flexible budget

Production (units)	8,000	10,000	14,000
Total Overheads (Rs.)	1,80,000	2,10,000	2,70,000

**You are required to calculate the following overhead variances (on hour's basis) with appropriate workings:**

- (i) Variable overhead efficiency and expenditure variance
- (ii) Fixed overhead efficiency and capacity variance.

B. SK Lit. is engaged in the manufacture of tyres. Analysis of income statement indicated a profit of Rs. 150 lakhs on a sales volume of 50,000 units. The fixed costs are Rs. 850 lakhs which appears to be high. Existing selling price is Rs. 3,400 per unit. The company is considering to revise the profit target to Rs. 350 lakhs. **You are required to compute** –

- (i) Break- even point at existing levels in units and in rupees.
- (ii) The number of units required to be sold to earn the target profit.
- (iii) Profit with 15% increase in selling price and drop in sales volume by 10%.
- (iv) Volume to be achieved to earn target profit at the revised selling price as calculated in (ii) above, if a reduction of 8% in the variable costs and Rs. 85 lakhs in the fixed cost is envisaged.

**QUESTION NO.6****(5\*4 = 20 MARKS)**

- A. DISCUSS the Escalation Clause in a Contract.
- B. Arnav Confectioners (AC) owns a bakery which is used to make bakery items like pastries, cakes and muffins. AC use to bake atleast 50 units of any item at a time. A customer has given an order for 600 muffins. To process a batch of 50 muffins, the following cost would be incurred:

Direct materials- Rs. 500

Direct wages- Rs. 50

Oven set- up cost Rs. 150

AC absorbs production overheads at a rate of 20% of direct wages cost. 10% is added to the total production cost of each batch to allow for selling, distribution and administration overheads.

AC requires a profit margin of 25% of sales value.

**DETERMINE the selling price for 600 muffins.**

- C. DISTINGUISH between Bill of Materials and Material Requisition Note.
- D. DISCUSS the remedial steps to be taken to minimize the labour turnover.