PART – II

1. (a) XYZ Company has an option to buy any one of the two machines N or M to manufacture its unique industrial component P. Each of the machines have the capacity to produce same quality of component P and are almost identical except for the fact that they are being manufactured by a different manufacturers. The specifications for each Machine are:

Machine M : It has the capacity to produce 50,000 components of P per annum, the fixed costs being ₹ 1,50,000 and could generate a profit of ₹ 2,25,000 on the sale of all the components produced.

Machine N : It is also having the equal capacity to produce same number of components as that of Machine M per annum and all the components thus produced could be sold in the open market without any difficulty. Fixed cost of Machine N is ₹ 60,000 less than that of Machine M and yield a profit of ₹ 1,60,000 by selling all the components that are produced.

Vc p.u.= 95.5
96.8

The selling price of each component of P is ₹ 100.

Required :

33333.33 | 28125

(i) Calculate break even sales in value for each machine. 3

(ii) Calculate sales levels in units where both the machines are equally profitable. 2

46153.84

3n = 6000
100n − 95.5 = 100
4.5n
15000
n − 96.8n
3.2x
9600

(b) PQR Ltd. manufactures a product in batches of 2,000 units. The following costs are incurred for each batch :

Particulars	Amount (in ₹)
Direct Material Cost per Batch	2,40,000
Direct Labour Cost per Batch	1,65,000
Overhead Absorption Rate (variable)	120 per machine hour
Expected Rejection Rate	3%
Scrap Value per Rejected Unit	75

Other Information :

Particulars	Details
Selling Price per Good Unit	₹ 250
Total Available Machine Hours per month	3,000 hours
Fixed Overheads per Month	₹ 1,25,000
Batches Manufactured per Month	10 batches

Required :

(i) Calculate contribution per unit of good units after adjusting rejected units. 22.69 — 3

(ii) Calculate the company's total monthly profit. 360000 — 2

(c) The Cost Accountant of a Manufacturing concern has given the following details in respect of a raw material X :

Difference between Minimum lead time and Maximum lead time is 4 days.

Average Lead time to procure the Raw Material X is 7 days.

Reorder Level	1,80,000 units
Reorder Quantity	90,000 units
Minimum Stock Level	1,00,000 units
Maximum Stock Level	1,90,000 units

Required to Calculate :

(i) Maximum Consumption per day 36000 units 2

(ii) Minimum Consumption per day 8888.88 units 2

2. (a) The following information relates to a manufacturing concern A Ltd. for the year ended 31st March, 2024. 9

Particulars	As on 1st April, 2023	As on 31st March, 2024
Raw Material (in ₹)	3,40,000	1,80,000
Work in Progress (in ₹)	5,50,000	3,50,000

O+P-C

FC +OWIP -CWIP

(In ₹)

Particulars	Amount
Raw Material Purchased [Inclusive of GST @18% (Ineligible for ITC)]	8,00,000
Packaging Cost (primary) NFC me Add	3,00,000
Fee Paid to Independent Directors A OHs	5,00,000
Production bonus paid to factory workers ~~Fo~~ DW	10% of Wages paid to factory workers
Job charges paid to job workers D Expenses	41,000
Salary paid to Supervisor FOHs	6,17,900
Wages paid to factory workers D Wages	6,30,000
Salary paid to Production Control Manager FOHs	7,20,000
Sale of Scrap generated during Manufacturing FC se minus	50,000
Selling Overheads per unit S&D OHs	2
Salary paid to General Manager O&AOHs	12,40,000
Freight Inwards → RM add	2% on Raw Material Purchased
Expenses Paid for Quality Control check activities QC related to Prodn	4,30,000

Particulars	Cost Price (₹)	WDV as on 1st April, 2023 (₹)	Depreciation Rate	Insurance Cost per annum
Factory Building	25,00,000	21,87,000	10%	2% of Cost Price
Plant and Machinery	15,00,000	11,56,000	15%	2% of Cost Price
Office Building	40,00,000	36,00,000	10%	Nil

Additional information :

(i) Depreciation is charged on the written down value method.

(ii) Stock of finished goods as on 1st April, 2023 was 80,000 units having a total cost of ₹ 8,00,000. The entire stock of opening finished goods is sold during the year, closing stock is 70,000 units. During the period, 4,50,000 units were sold.

(iii) A Ltd. wants a profit of 20% on Total Sales.

Required :

Prepare a Cost statement showing the various elements of cost and profit earned for the year ended 31st March, 2024.

440000 units Produce

Total US sold ⇒ 450000 units
(80000) units
470000 ~~traded~~ ~~units~~ Bal
(~~70000~~)
~~380000 traded~~

(b) A skilled worker has assigned a work. The relevant data is given as follows : 5

Time rate per hour	₹ 25
Time allowed	9 hours
Time taken	6 hours

The worker has given an option to choose either Halsey (50% plan) or Rowan plan.

₹200 ₹187.5

You are required to calculate earnings under both plans and which plan is more beneficial for a worker.

Rowan

3. (a) A chemical compound manufactured through two processes namely Process X and Process Y. Process Y is dependent on the output generated by Process X and the semi-finished chemical compound received from Process X shall be mixed up with further materials in Process Y. The details of costs and other particulars for each process are given as follows : 2+2+2+2=8

	Process X	Process Y
Direct Material	1,000 kgs @ ₹ 50 per kg	700 kgs @ ₹ 90 per kg
Direct Labour	₹ 35,000	₹ 25,000
Process Plant time	200 hrs @ ₹ 60/hr	120 hrs @₹ 80/hr
Expected output	75% of input	80% of input
Actual output kgs	700	1150
Realizable value of Normal Loss	₹ 8 per kg	₹ 5 per kg

Notes :

(i) The departmental overhead for the period was ₹ 30,000 and is absorbed in each process on direct labour cost.

(ii) Process plant time represents the attributable plant run time with respect to each process and is a part of direct process cost.

(iii) Assume no finished stock and work in progress either at the beginning and end of the period.

Required :

Prepare Process X Account, Process Y Account, Normal Loss Account and Abnormal Gain Account.

(b) SW Limited manufactures Lenin bed covers. The present cost data are as below : 6

Variable Cost of manufacturing per unit	: ₹ 200
Variable cost of selling and distribution per unit	: ₹ 100
Fixed costs	: ₹ 16,00,000
Selling price per unit	: ₹ 800
Expected Profit for the coming year	: ₹ 8,00,000

Units Sold = 4800 Unit

The management could sense a stage of stagnation/deterioration in future sales with the new entrant RK Enterprises. The SW limited has approached to one marketing consulting firm for the study of cost volume profit analysis. The firm suggested three alternatives to fuel the sales growth by tinkering with the selling price.

Alternatives	Reduce selling price %	Projected increase in sales (units) % (from the sales level that would generate ₹ 8,00,000 profit)
1	10.00	15
2	12.50	20
3	15.00	25

Required :

Calculate the effect on profits under each alternative and recommend which alternative is most likely to be adopted to get the maximum profit.

718400 704000 600000

5520 Unit 10.2% 5760 Unit 12% 6000 Unit 15%

4. (a) XYZ Transport is running a bus between town A and town B which are 25 kms apart. The bus will make 4 round trips every day carrying on an average 30 passengers on each trip. The bus costs the company a sum of ₹ 5,00,000. It has been insured at 2% per annum and the annual tax will amount to ₹ 2,000 and the garage rent is ₹ 500 per month. Annual repairs will be ₹ 8,000 and the bus is likely to last for 5 years. The driver's salary will be ₹ 15,000 per month and the conductor's salary will be ₹ 12,000 per month in addition to 10% of the takings as commission (to be shared by the driver and conductor equally). Cost of stationery will be ₹ 800 per month. Manager-cum-accountant's salary is ₹ 35,000 per month. Petrol and Oil will be ₹ 1,000 per 100 km. Assuming 15% profit on takings. Depreciation will be charged at straight line method.

You are required to calculate the bus fare to be charged for per passenger kilometer. The bus will run on an average 25 days in a month.

(b) LMN Foods is a manufacturer of organic snacks. For the year ending 2023, the company compiled the following financial data :

Item	Amount (in ₹)
Opening inventory of raw materials	2,00,000
Closing inventory of raw materials	2,50,000
Raw material purchases	12,00,000
Labour costs	5,00,000
Production overheads	2,50,000
Marketing and distribution expenses	1,52,000

In 2024, LMN Foods accepted a request for a bulk supply of their best-selling snacks. The estimated costs for fulfilling this order are as follows :

- Estimated raw material cost : ₹ 3,00,000
- Estimated labour cost : ₹ 1,50,000
- Packaging and transportation costs : ₹ 49,400

LMN Foods allocates production overhead based on direct labour costs and marketing and distribution expenses as a percentage of the total production cost based on the previous year's data.

Required :

(i) Calculate the overhead recovery rates for 2023 based on actual costs. 2

(ii) Prepare a comprehensive cost statement for the bulk order and determine the Sales required for achieving a profit margin of 20% on the final sales amount. 4

5. (a) The following information has been provided by a company :

Number of units produced and sold : 7,000

Standard labour rate per hour : ₹ 9

Actual hours worked : 17,820 hours

Labour efficiency : 106.8%

Labour rate variance : ₹ 71,280 (A)

You are required to calculate :

(i) Actual labour rate per hour 1

(ii) Standard hours required for 7,000 units 2

(iii) Labour Efficiency variance 1

(iv) Standard labour cost per unit 1

(v) Actual labour cost per unit 1

(b) Journalise the following transactions assuming that cost and financial accounts are integrated : 4

Particulars	Amount (in ₹)
Wages paid (20% indirect)	2,00,000
Selling and Distribution Overheads incurred	50,000
Deficiency found in stock of Raw Material (Normal)	80,000
Factory Overheads (Under Absorbed)	60,000

(c) Define spoiled work and defective work and discuss the treatment of defective work in the following circumstances : 1+3

Circumstances	Treatment
Where a percentage of defective work is allowed in a particular batch as it cannot be avoided.	
Where the defect is due to bad workmanship.	
Where defect is due to the Inspection Department wrongly accepting incoming material of poor quality.	

(a) Explain the steps involved in procedure for reconciliation of Cost & Financial accounts. Also explain the circumstances where reconciliation statement can be avoided. 3+2