TOPIC : FULL

Question No. 1 is compulsory.

Answer any four questions from the remaining five questions.

Wherever necessary, suitable assumptions may be made and indicated in answer by the candidates.

Working Notes should form part of the answer.

QUESTION NO.1 **(5 MARKS X 4 = 20 MARKS)**

A. Following data is available for ABC Ltd.:

Standard working hours	8 hours per day of 5 days per week
Maximum Capacity	60 employees
Actual working	50 employees
Actual hours expected to be worked per four week	8,000 hours
Standard hours expected to be earned per four week	9,600·hours
Actual hours worked in the four week period	7,500 hours
Standard hours earned in the four week period	8,800 hours

The related period is of four weeks. **Calculate the following Ratios** :

(i) Efficiency Ratio

(ii) Activity Ratio

(iii) Standard Capacity Usage Ratio

(iv) Actual Capacity Usage Ratio

(v) Actual Usage of Budgeted Capacity Ratio

B. BTL LLP. manufactures glass bottles for HDL Ltd., a pharmaceutical company, which is in ayurvedic medicines business. BTL can produce 2,00,000 bottles in a month. Set-up cost of each production run is Rs. 5,200 and the cost of holding one bottle for a year is Rs. 1.50.

As per an estimate HDL Ltd. can order as much as 19,00,000 bottles in a year spreading evenly throughout the year.

At present the BTL manufactures 1,60,000 bottles in a batch.

Required:

(i) COMPUTE the Economic Batch Quantity for bottle production.

(ii) COMPUTE the annual cost saving to BTL by adopting the EBQ of a production.

C. HBL Limited produces product 'M' which has a quarterly demand of 20,000 units. Each product requires 3 kg. and 4 kg. of material X and Y respectively. Material X is supplied by a local supplier and can be procured at factory stores at any time, hence, no need to keep inventory for material X. The material Y is not locally available, it requires to be purchased from other states in a specially designed truck container with a capacity of 10 tons.

The cost and other information related with the materials are as follows:

Particulars	**Material –X**	**Material-Y**
Purchase price per kg. (excluding GST)	Rs.140	Rs.640
Rate of GST	18%	18%
Freight per trip (fixed, irrespective of quantity)	-	Rs.28,000
Loss of materials in transit	-	2%
Loss in process	4%	5%

Other information:

- The company has to pay 15% p.a. to bank for cash credit facility.
- Input credit is available on GST paid on materials.

Required:

a. CALCULATE cost per kg. of material X and Y
b. CALCULATE the Economic Order quantity for both the materials.

D. A Factory is engaged in the production of chemical Bomex and in the course of its manufacture a by-product Cromex is produced which after further processing has a commercial value. For the month of April 2019 the following are the summarised cost data:

	Joint Expenses (Rs.)	Separate Expenses (Rs.)	
		Bomex	Cromex
Materials	1,00,000	6,000	4,000
Labour	50,000	20,000	18,000
Overheads	30,000	10,000	6,000
Selling Price per unit		100	40
Estimated profit per unit on sale of Cromex			5
Number of units produced		2,000 units	2,000 units

The factory uses net realisable value method for apportionment of joint cost to by-products.

You are required to prepare statements showing :

a. Joint cost allocable to Cromex
b. Product wise and overall profitability of the factory for April 2019.

QUESTION NO.2 **(10 MARKS X 2 = 20 MARKS)**

A. GVL Ltd. commenced a contract on April 1, 2018. The total contract was for Rs. 1,08,50,000. It was decided to estimate the total profit and to take to the credit of Costing P & L A/c the proportion of estimated profit on cash basis which work completed bear to the total contract. Actual expenditure in 2018-19 and estimated expenditure in 2019-20 are given below:

	2018-19	2019-20
	Actual (Rs.)	Estimated (Rs.)
Material issued	18,24,000	32,56,000
Labour : Paid	12,20,000	15,20,000
: Outstanding at end	96,000	1,50,000
Plant purchased	9,00,000	-
Expenses : Paid	4,00,000	7,00,000
: Outstanding at the end	-	1,00,000
: Prepaid at the end	90,000	-
Plant returned to stores (a historical stores)	3,00,000	6,00,000 (on Sep. 30, 2019)
Material at site	1,20,000	3,00,000
Work-in progress certified	51,00,000	Full
Work-in-progress uncertified	1,60,000	----
Cash received	40,00,000	Full

The plant is subject to annual depreciation @ 20% of WDV cost. The contract is likely to be completed on September 30, 2019.

Required:

a. PREPARE the Contract A/c for the year 2018-19.

b. ESTIMATE the profit for the contract.

B. 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.

QUESTION NO.3 **(10 MARKS X 2 = 20 MARKS)**

A. A transport company has a fleet of four trucks of 10 tonne capacity each plying in different directions for transport of customer's goods. The trucks run loaded with goods and return empty. The distance travelled, number of trips made and the load carried per day by each truck are as under:

Truck No.	One way Distance Km	No. of trips per day	Load carried per trip / day tonnes
1	48	4	6
2	120	1	9
3	90	2	8
4	60	4	8

The analysis of maintenance cost and the total distance travelled during the last two years is as under

Year	Total distance travelled	Maintenance Cost Rs.
1	1,60,200	1,38,150
2	1,56,700	1,35,525

The following are the details of expenses for the year under review:

Diesel	Rs. 60 per litre. Each litre gives 4 km per litre of diesel on an average.
Driver's salary	Rs. 22,000 per truck per month
Licence and taxes	Rs. 15,000 per annum per truck
Insurance	Rs. 80,000 per annum for all the four trucks
Purchase Price per truck	Rs.30,00,000, Life 10 years. Scrap value at the end of life is Rs.1,00,000.

Oil and sundries	Rs. 525 per 100 km run.
General Overhead	Rs. 1,10,840 per annum

The trucks operate 24 days per month on an average.

Required

(i) PREPARE an Annual Cost Statement covering the fleet of four trucks.

(ii) CALCULATE the cost per km. run.

(iii) DETERMINE the freight rate per tonne km. to yield a profit of 30% on freight.

B. KT Ltd. produces a product EMM which passes through two processes before it is completed and transferred to finished stock. The following data relate to May 2019:

Particulars	Process		Finished stock
	A (Rs.)	B (Rs.)	(Rs.)
Opening Stock	5,000	5,500	10,000
Direct Materials	9,000	9,500	
Direct Wages	5,000	6,000	
Factory Overheads	4,600	2,030	
Closing Stock	2,000	2,490	5,000
Inter-process profit included in opening stock		1,000	4,000

Output of Process A is transferred to Process B at 25% profit on the transfer price and output of Process B is transferred to finished stock at 20% profit on the transfer price. Stock in process is valued at prime cost. Finished stock is valued at the price at which it is received from Process B. Sales during the period are Rs. 75,000.

Prepare the Process cost accounts and Finished stock account showing the profit element at each stage.

QUESTION NO.4 **(10 MARKS X 2 = 20 MARKS)**

A. KLM Limited has prepared its expense budget for 50,000 units in its factory for the year 2019-20 as detailed below:

	(Rs. per unit)
Direct Materials	125
Direct Labour	50
Variable Overhead	40
Direct Expenses	15
Selling Expenses (20% fixed)	25

Factory Expenses (100% fixed)	15
Administration expenses (100% fixed)	8
Distribution expenses (85% variable)	20
Total	298

PREPARE an expense budget for the production of 35,000 units and 70,000 units.

B. A gang of workers normally consists of 30 skilled workers, 15 semi-skilled workers and 10 unskilled workers. They are paid at standard rate per hour as under:

Skilled Rs. 70

Semi-skilled Rs. 65

Unskilled Rs. 50

In a normal working week of 40 hours, the gang is expected to produce 2,000 units of output. During the week ended 31st March, 2019, the gang consisted of 40 skilled, 10 semi-skilled and 5 unskilled workers. The actual wages paid were at the rate of Rs. 75, Rs. 60 and Rs. 52 per hour respectively. Four hours were lost due to machine breakdown and 1,600 units were produced.

Calculate the following variances showing clearly adverse (A) or favourable (F)

(i) Labour Cost Variance (ii) Labour Rate Variance

(iii) Labour Efficiency Variance (iv) Labour Mix Variance

(v) Labour Idle Time Variance

QUESTION NO.5

A. PVC Ltd sold 55,000 units of its product at Rs.375 per unit. Variable costs are Rs.175 per unit (manufacturing costs of Rs.140 and selling cost Rs.35 per unit). Fixed costs are incurred uniformly throughout the year and amount to Rs.65,00,000 (including depreciation of Rs.15,00,000). There is no beginning or ending inventories.

Required: **(5 MARKS)**

(i) COMPUTE breakeven sales level quantity and cash breakeven sales level quantity.

(ii) COMPUTE the P/V ratio.

(iii) COMPUTE the number of units that must be sold to earn an income (EBIT) of Rs.5,00,000.

(iv) COMPUTE the sales level achieve an after-tax income (PAT) of Rs.5,00,000, assume 40% corporate tax rate..

B. ADV Pvt. Ltd. manufactures a product which requires skill and precision in work to get quality products. The company has been experiencing high labour cost due to slow speed of work. The management of the company wants to reduce the labour cost but without compromising with the quality of work. It wants to introduce a bonus scheme but is indifferent between the Halsey and Rowan scheme of bonus.

For the month of November 2019, the company budgeted for 24,960 hours of work. The workers are paid Rs.80 per hour.

Required:

a. CALCULATE and suggest the bonus scheme where the time taken (in %) to time allowed to complete the works is (a) 100% (b) 75% (c) 50% & (d) 25% of budgeted hours.

(5 MARKS)

C. 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.

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 NO.6 **(5 MARKS X 4 = 20 MARKS)**

A. What are the cases when a flexible budget is found suitable?

B. DIFFERENTIATE between Cost Accounting and Management Accounting.

C. EXPLAIN the meaning of Budget Manual.

D. Explain integrated accounting system and state its advantages.