

**Question No. 1 is compulsory.**

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

**Working notes should form part of the answer.**

**QUESTION NO.1**

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

- A. Madhu Ltd. has calculated a predetermined overhead rate of Rs.22 per machine hour for its Quality Check (QC) department. This rate has been calculated for the budgeted level of activity and is considered as appropriate for absorbing overheads. The following overhead expenditures at various activity levels had been estimated.

Total overheads	Number of machine hours
Rs.3,38,875	14,500
Rs.3,47,625	15,500
Rs.3,56,375	16,500

**You are required to:**

- i. CALCULATE the variable overhead absorption rate per machine hour.
  - ii. CALCULATE the estimated total fixed overheads.
  - iii. CALCULATE the budgeted level of activity in machine hours.
  - iv. CALCULATE the amount of under/over absorption of overheads if the actual machine hours were 14,970 and actual overheads were Rs.3,22,000.
  - v. ANALYSE the arguments for and against using departmental absorption rates as opposed to a single or blanket factory wide rate.
- B. A manufacturing company disclosed a net loss of Rs.3,47,000 as per their cost accounts for the year ended March 31,20X8. The financial accounts however disclosed a net loss of Rs. 5,10,000 for the same period. The following information was revealed as a result of scrutiny of the figures of both the sets of accounts.

	(Rs.)
(i) Factory Overheads under-absorbed	40,000
(ii) Administration Overheadsover-absorbed	60,000
(iii) Depreciation charged in Financial Accounts	3,25,000
(iv) Depreciation charged in Cost Accounts	2,75,000
(v) Interest on investments not included in Cost Accounts	96,000
(vi) Income-tax provided	54,000
(vii) Interest on loan funds in Financial Accounts	2,45,000
(viii) Transfer fees (credit in financial books)	24,000
(ix) Stores adjustment (credit in financial books)	14,000
(x) Dividend received	32,000

**PREPARE a memorandum Reconciliation Account.**

C. Arnav 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. Arnav 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 how much extra costs the company would be incurring as compared to the optimum run suggested in (i) above?

D. Following details are related to a manufacturing concern:

Re-order Level	1,60,000 units
Economic Order Quality	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

**QUESTION NO.2**

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

A. Aditya Agro Ltd. mixes powdered ingredients in two different processes to produce one product. The output of Process- I becomes the input of Process-II and the output of Process-II is transferred to the Packing department.

From the information given below, you are required to **PREPARE accounts for Process-I, Process-II and Abnormal loss/ gain A/c** to record the transactions for the month of February 20X9.

**Process-I**

Input:	
Material A	6,000 kilograms at Rs. 50 per kilogram
Material B	4,000 kilograms at Rs. 100 per kilogram
Labour	430 hours at Rs. 50 per hour
Normal loss	5% of inputs. Scrap are disposed off at Rs.16 per kilogram
Output	9,200 kilograms.

There is no work- in- process at the beginning or end of the month.

**Process-II**

Input:	
Material C	6,600 kilograms at Rs. 125 per kilogram
Material D	4,200 kilograms at Rs. 75 per kilogram
Flavouring Essence	Rs. 3,300
Labour	370 hours at Rs.50 per hour
Normal loss	5% of inputs with no disposal value
Output	18,000 kilograms.

There is no work-in-process at the beginning of the month but 1,000 kilograms in process at the end of the month and estimated to be only 50% complete so far as labour and overhead were concerned.

Overhead of Rs. 92,000 incurred to be absorbed on the basis of labour hours.

- B. A company runs a holiday home. For this purpose, it has hired a building at a rent of Rs.10,00,000 per month along with 5% of total taking. It has three types of suites for its customers, viz., single room, double rooms and triple rooms.

Following information is given:

Type of suite	Number	Occupancy percentage
Single room	100	100%
Double rooms	50	80%
Triple rooms	30	60%

The rent of double rooms suite is to be fixed at 2.5 times of the single room suite and that of triple rooms suite as twice of the double rooms suite.

The other expenses for the year 20X9 are as follows:

	(Rs.)
Staff salaries	14,25,00,000
Room attendants' wages	4,50,00,000
Lighting, heating and power	2,15,00,000
Repairs and renovation	1,23,50,000
Laundry charges	80,50,000
Interior decoration	74,00,000
Sundries	1,53,00,000

Provide profit @ 20% on total taking and assume 360 days in a year.

**You are required to CALCULATE the rent to be charged for each type of suite.**

**QUESTION NO.3**

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

- A. A Light Motor Vehicle manufacturer has prepared sales budget for the next few months, and the following draft figures are available:

Month	No. of vehicles
October	4,000
November	3,500
December	4,500
January	6,000
February	6,500

To manufacture a vehicle a standard cost of Rs. 2,85,700 is incurred and sold through dealers at an uniform selling price of Rs. 3,95,600 to customers. Dealers are paid 12.5% commission on selling price on sale of a vehicle.

Apart from other materials four units of Part-X are required to manufacture a vehicle. It is a policy of the company to hold stocks of Part-X at the end of the each month to cover 40% of next month's production. 4,800 units of Part-X are in stock as on 1st October.

There are 950 nos. of completed vehicles are in stock as on 1st October and it is policy to have stocks at the end of each month to cover 20% of the next month's sales.

**You are required to**

- (a) Prepare Production budget (in nos.) for the month of October, November, December and January.
- (b) Prepare a Purchase budget for Part-X (in units) for the months of October, November and December.
- (c) Calculate the budgeted gross profit for the quarter October to December.

B. XYZ LLP, contractors and civil engineers, are building a new wing to a school. The quoted fixed price for the contract is Rs.30,00,000. Work commenced on 1<sup>st</sup> January 20X8 and is expected to be completed on schedule by 30 June 20X9.

Data relating to the contract at the year ended 31<sup>st</sup> March 20X9 is as follows.

	<b>Amount (Rs.)</b>
Plant sent to site at commencement of contract	2,40,000
Hire of plant and equipment	77,000
Materials sent to site	6,62,000
Materials returned from site	47,000
Direct wages paid	9,60,000
Wage related costs	1,32,000
Direct expenses incurred	34,000
Supervisory staff salaries - Direct	90,000
- Indirect	20,000
Regional office expenses apportioned to contract	50,000
Head office expenses apportioned to contract	30,000
Surveyor's fees	27,000
Progress payments received from school	18,00,000

Additional information:

1. Plant is to be depreciated at the rate of 25 % per annum following straight line method, with no residual value.
2. Unused materials on site at 31st March are estimated at Rs. 50,000.
3. Wages owed to direct workers total Rs. 40,000
4. No profit in respect of this contract was included in the year ended 31<sup>st</sup> March 2016.
5. Budgeted profit on the contract is Rs. 8,00,000
6. Value of work certified by the surveyor is Rs. 24,00,000.
7. The surveyor has not certified the work costing Rs. 1,80,000

**You are required to PREPARE the account for the school contract** for the fifteen months ended 31<sup>st</sup> March 20X9, and **CALCULATE** the notional profit to date.

**QUESTION NO.4**

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

A. The following figures are related to LM Limited for the year ending 31st March, 2014 :  
Sales - 24,000 units @ Rs. 200 per unit; P/V Ratio 25% and Break-even Point 50% of sales. **You are required to calculate:**

- (i) Fixed cost for the year
- (ii) Profit earned for the year
- (iii) Units to be sold to earn a target net profit of Rs. 11,00,000 for a year.
- (iv) Number of units to be sold to earn a net income of 25% on cost.
- (v) Selling price per unit if Break-even Point is to be brought down by 4,000 units.

B. A company processes a raw material in its Department 1 to produce three products, viz. A, B and X at the same split – off stage. During a period 1,80,000 kgs of raw materials were processed in Department 1 at a total cost of Rs. 12,88,000 and the resultant output of A, B and X were 18,000 kgs, 10,000 kgs and 54,000 kgs respectively. A and B were further processed in Department 2 at a cost of Rs. 1,80,000 and Rs. 1,50,000 respectively.

X was further processes in Department 3 at a cost of Rs. 1,08,000. There is no waste in further processing. The details of sales affected during the period were as under :

	<b>A</b>	<b>B</b>	<b>X</b>
Quantity Sold (Kgs.)	17,000	5,000	44,000
Sales Value (Rs.)	12,24,000	2,50,000	7,92,000

There were no opening stocks. If these products were sold at split – off stage, the selling prices of A, B and X would have been Rs. 50, Rs. 40 and Rs. 10 per kg respectively.

**Required :**

- (i) PREPARE a statement showing the apportionment of joint costs to A, B and X.
- (ii) PREPARE a statement showing the cost per kg of each product indicating joint cost and further processing cost and total cost separately.
- (iii) PREPARE a statement showing the product wise and total profit for the period.
- (iv) DECIDE with supporting calculations as to whether any or all the products should be further processes or not

**QUESTION NO.5****(10 MARKS X 2 = 20 MARKS)**

A. The standard cost of a certain chemical mixture is as under :

40% of Material A at Rs. 20 per tonne. 60% of Material B at Rs. 30 per tonne.

A standard loss of 10% is expected in production. The following actual cost data is given for the period.

180 tonnes material A at a cost of Rs. 18 per tonne.

220 tonnes material B at a cost of Rs. 34 per tonne.

The weight produced is 364 tonne.

**Calculate and present :**

- (a) Material Price Variance.
- (b) Material Mix Variance.
- (c) Material Yield Variance.
- (d) Material Cost Variance.
- (e) Material Usage Variance.

B. Family Store wants information about the profitability of individual product lines : Soft drinks, Fresh produce and Packaged food. Family store provides the following data for the year 20X7 – X8 for each product line :

	<b>Soft drinks</b>	<b>Fresh produce</b>	<b>Packaged food</b>
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 returns	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

Family store also provides the following information for the year 20X7 – X8 :

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	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 :**

- (i) Family store currently allocates support cost (all cost other than cost of goods sold) to product lines on the basis of cost of goods sold of each product line. CALCULATE the operating income and operating income as a % of revenues for each product line.
- (ii) If Family Store allocates support costs (all costs other than cost of goods sold) to product lines using and activity passed costing system, CALCULATE the operating income and operating income as a % of revenues for each product line.

**QUESTION NO.6**

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

- A. DEFINE cost plus contract? STATE its advantages.
- B. “Is reconciliation of cost accounts and financial accounts necessary in case of integrated accounting system?” EXPLAIN.
- C. DISCUSS the accounting treatment of Idle time and overtime wages.
- D. EXPLAIN the difference between product cost and period cost