

## Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.

## Q. 1 Attempt the following (Any One). [14]

A) A standard gang for a 40-hour week is:

Category	No. of Workers	Std Rate (₹/hr)
Men	30	85
Women	18	65
Boys	12	42

Standard output for the week = 6,200 units.

Actual for the week:

Category	No. of Workers	Actual Rate (₹/hr)
Men	28	88
Women	20	62
Boys	10	45

Actual output = 5,900 units.

(Assume the gang worked 40 hours.)

## Calculate:

- (i) Labour Cost Variance (LCV)
- (ii) Labour Rate Variance (LRV)
- (iii) Labour Efficiency Variance (LEV)
- (iv) Labour Mix Variance (LMV)
- (v) Labour Yield Variance (LYV)

## OR

B) RHY Ltd. manufactures a chemical product 'RHY-A'. Production is carried out in batches. Each batch requires a standard input of materials and yields a standard output after normal process loss. Details for the month of April are given below.

## Batch &amp; Output Details (April)

Number of batches prepared	40
Standard input per batch	120 kg
Standard output per batch	108 kg

## Standard and Actual Mix, Prices &amp; Quantities (April)

Material	STANDARD		ACTUAL		
	Std Mix %	Std Price (₹/kg)	Actual Mix %	Actual Price (₹/kg)	Actual Quantity (kg)
A	50%	₹24	48%	₹25	2,350
B	30%	₹12	32%	₹11.50	1,560
C	20%	₹6	20%	₹6.20	1,000

\*Based on a standard input of 120 kg per batch; quantities are implied by mix %.

Actual output achieved in April: 36,500 kg.

Required

(a) Material Cost Variance (MCV)

- (b) Material Price Variance (MPV)
- (c) Material Mix Variance (MMV)
- (d) Material Yield Variance (MYV)
- (e) Material Usage Variance (MUV)

Q. 2      Attempt the following (Any One). [12]

A) At 90% capacity, output is 18,000 units  $\Rightarrow$  100% = 20,000 units.  
 Selling price = ₹150 per unit (constant).

Particulars	Cost per Unitat 90%	Variability
Direct Materials	55	Variable
Direct Labour	40	Variable
Direct Expenses	5	Variable
Variable Overheads	5	Variable
Production Overheads	12	50% variable
Administrative Overheads	8	25% variable
Selling & Distribution OH	10	20% variable

Prepare Flexible Budget for - 60%, 75% and 100% level.

OR

B) Elite Appliances forecasts sales for six months as below:

Month	Apr	May	Jun	Jul	Aug	Sep
Estimated Sales (Units)	12,000	13,500	9,500	8,200	10,800	12,400

Policy: Closing Finished Goods = 40% of next month's sales; Opening Finished Goods on 1st April = 5,000 units.

Each unit requires Material P = 2.5 kg and Material Q = 0.8 kg. Closing RM stock = 30% of next month's consumption. Opening stocks (1st April): P = 7,800 kg; Q = 2,340 kg.

Prices: P @ ₹5/kg for Apr-Jun and ₹6/kg for Jul-Sep; Q @ ₹4/kg throughout.

There is no WIP at month ends. Required: Prepare (i) Production Budget, (ii) Material Consumption Budget, and (iii) Raw Material Purchase Budget (qty& value) for April-September.

Q. 3      Attempt the following (Any One).

[12]

A) A transport company owns one lorry and one city bus. Both vehicles operate 25 days in a month.

Standing Costs

Particulars	Lorry (₹)	Bus (₹)
Driver & Cleaner Salaries (per month)	20,000	15,000
Insurance (per annum)	1,20,000	84,000
Office & Garage Rent (per month)	12,000	10,000
Depreciation (cost & life)	₹12,00,000; 10 years	₹9,60,000; 8 years
Road Tax & Permits (per annum)	60,000	48,000

Running Information

Parameter	Lorry	Bus
Distance per day (two-way)	200 km	100 km
Load / Seating	5 tonnes per trip	40 seats
Average Occupancy	80%	75%
Fuel	1 litre per 5 km	1 litre per 4 km
Fuel Price	₹100 per litre	₹100 per litre
Lubricants & Tyres	₹2 per km	₹2 per km

Required:

(a) Prepare monthly Operating Cost Statements for both Lorry and Bus.  
 (b) Compute cost per tonne-km for the lorry and cost per passenger-km for the bus

OR

B) Starline Travels operates one coach between **Delhi and Jaipur** (270 km one way).

- The coach makes **10 round trips/month** to Jaipur, and **10 round trips/month** to Agra (180 km one way).
- On the remaining **5 days**, it operates in local city service: **50 km per trip, 6 trips per day**.  
 Total = 25 operating days.

Cost Data

Particulars	Amount
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Cost of Bus	₹18,00,000
Depreciation	10% p.a., nil scrap
Driver Salary	₹30,000 per month
Conductor Salary	₹20,000 per month
Insurance	₹24,000 per annum
Permit Fees & Token Tax	₹12,000 per quarter
Repairs & Maintenance	₹15,000 per month
Fuel Consumption	1 litre per 5 km
Fuel Price	₹100 per litre
Lubricants	₹2 per km
Seating Capacity	50 seats

**Operating Conditions:**

- Occupancy: 90% on Jaipur trips, 80% on Agra trips, 70% on city trips.
- Passenger tax = 20% of fare collected.
- Company desires **profit = 25% of total revenue.**

**Required:**

Prepare a monthly **Operating Cost Sheet** and calculate the fare per passenger-km

Q. 4

Attempt the following (Any One).

[12]

A)

Selling Price per unit	₹40
Variable Cost per unit	₹28
Fixed Costs	₹2,40,000
Required	
(a) P/V Ratio	
(b) Break-even Point (Units & ₹)	
(c) Sales for Profit ₹1,20,000	
(d) Margin of Safety if Actual Sales = ₹10,00,000	

**OR**

B) The following figures relate to a company for Year 1 and Year 2:

Particulars	Year 1	Year 2
Sales (₹)	15,00,000	18,00,000
Variable Cost (₹)	9,00,000	10,80,000
Fixed Cost (₹)	3,00,000	3,60,000

**Required:**

- Contribution and P/V Ratio for both years
- Break-even Sales for both years
- Profit or Loss in each year
- Margin of Safety (₹ and %) for both years
- Comment briefly on the comparative performance

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