

Time Allowed : 3 hours

Full Syllabus Paper-01

Total : 100 Marks

Part I : Case Scenario Based MCQs (30 Marks)

Q.1 The management of a company are worried about their increasing labour turnover in the factory and before analyzing the causes and taking remedial steps, they want to have an idea of the profit foregone as a result of labour turnover in the last year. Last year sale amounted ₹ 83,03,300 and variable cost was 80% of sales. The total number of actual hours worked by the Direct Labour Force was 4.45 lakhs.

As a result of the delay by the Personnel Department in filling vacancies due to labour turnover, 1,00,000 potentially productive hours were lost. The actual direct labour hours included 30,000 hours attributable to training new recruits, out of which half of the hours were unproductive. The costs incurred consequent on labour turnover revealed on analysis the following: -

Settlement costs due to leaving - ₹43,820	Selection costs - ₹12,750
Recruitment costs - ₹26,740	Training costs - ₹30,490

Assuming that the potential production lost as a consequence of labour turnover could have been sold at prevailing prices.

You are asked to calculate the following:

- (i) Total labour hours lost due to the problem of labour turnover, i.e., unproductive training + Delay in replacement.
 (A) 1,00,000 hours (B) 1,30,000 hours (C) 1,15,000 hours (D) 1,45,000 hours
- (ii) Additional Sales which could have been obtained had there been no labour turnover.
 (A) ₹ 22,20,650 (B) ₹ 22,02,650 (C) 22,22,650 (D) ₹ 22,00,650
- (iii) If there were no labour turnover, total sales would have been
 (A) ₹ 1,05,32,950 (B) 1,05,32,590 (C) ₹ 1,05,23,590 (D) 1,05,23,950
- (iv) Total Profit foregone due to labour turnover is:-
 (A) ₹ 5,75,930 (B) ₹ 5,57,930 (C) ₹ 5,75,390 (D) 5,57,390
- (v) If sales is lost due to labour turnover then
 (A) Proportionate Variable Cost will also be saved.
 (B) Proportionate Fixed Cost will also be saved.
 (C) Both Variable & Fixed Cost can be saved
 (D) None of the above

(10 Marks)

Q.2 Mr. Arun commence manufacture of toy trains on 1st January, 2024. His trading account for the first year is as follows:

Particulars	Units	Amount (₹)	Amount (₹)
Sales	1,00,000		4,50,00,000
Less: Cost of Sales:			
Opening stock of raw materials		NIL	
Add: Purchases		4,50,00,000	
Less: Closing Stock		(45,00,000)	
Raw material consumed		4,05,00,000	
Add: Labor		1,44,00,000	
Add: Production overhead		72,00,000	
Cost of production	1,60,000	6,21,00,000	
Less: closing stock	(60,000)	(2,16,00,000)	(4,05,00,000)
Gross profit	1,00,000		45,00,000

Additional information:

- Stocks of both raw materials and finished goods have increased uniformly over the year;
- The raw materials content of finished goods is ₹ 225 per unit;

Mr. Arun was ill during August 2024 when he received an order for 12,000 units which was held up by stock shortage and were subsequently cancelled. He had further orders for 8,000 units on his books at the year end.

You are asked to calculate the following:

- (i) Raw material turnover ratio
(A) 20 times. (B) 18 times. (C) 25 times. (D) 30 times.
- (ii) Input – Output Ratio
(A) 100% (B) 110% (C) 112.5% (D) 115%
- (iii) Finished Goods Turnover Ratio
(A) 3 times (B) 3.5 times (C) 3.75 times (D) 3.85 times.
- (iv) Stock – out ratio
(A) 8% (B) 9% (C) 9.5% (D) 10%
- (v) Stock – out ratio indicates that the organization lacks internal control system regarding stock management.
(A) True (B) False (C) Both (D) Can't say **(10 Marks)**

Q.3 A skilled worker is paid a guaranteed wage rate of ₹ 120 per hour. The standard time allowed for a job is 6 hours. He took 5 hours to complete the job. He is paid wages under Rowan incentive plan. If the worker is placed under Halsey incentive scheme (50%) and he wants to maintain the same effective hourly rate of earnings, calculate the time in which he should complete the job.

- (A) 5 hours (B) 6 hours (C) 5.5 hours (D) 4.5 hours **(2 Marks)**

Q.4 P/V Ratio = 28%

Fixed Cost = ₹ 2,80,000

Sales for desired profit of ₹ 70,000 is

- (a) ₹ 12,00,000 (b) ₹ 12,50,000 (c) ₹ 11,50,000 (d) ₹ 10,00,000 **(2 Marks)**

Q.5 Activity Ratio is 96% and Capacity Ratio is 80%. Efficiency Ratio is:-

- (a) 110% (b) 115% (c) 120% (d) 125% **(2 Marks)**

Q.6 Total Factory Overheads = ₹ 1,20,000

Budgeted Machine Hours = 15,000 Hours

Normal Loss = 3,000 Machine Hours

Abnormal Loss = 2,000 Machine Hours

Calculate Machine Hour Rate

- (a) ₹ 8 per Machine Hour (b) ₹ 10 per Machine Hour
(c) ₹ 12 per Machine Hour (d) None of the Above

(2 Marks)

Q.7 Total Monthly Cost of running a bus = ₹ 2,40,000.

Total travelling in a month = 3,000 kms.

Capacity = 100 passengers

Normal Occupancy = 80%

Calculate Cost per passenger – km

- (a) ₹ 1 (b) ₹ 2 (c) ₹ 3 (d) None of the Above **(2 Marks)**

Part II: Descriptive Questions (70 Marks)**Q. No. 8 is Compulsory****Attempt any four out of remaining 5 questions.**

- Q.8 (A)** The following data are available in respect of Process I for the month of October, 2004:
- Opening work-in-progress - 2,250 Units at ₹ 11,250
 Degree of Completion: Materials - 100%, Labour - 60% and Overheads - 60%.
 Input of materials - 22,750 Units at ₹ 88,500
 Direct wages - ₹ 20,500 and Production overheads - ₹ 41,000
 Units scrapped 3,000 Units
 Degree of Completion: Material - 100%, Labour - 70% and Production overheads - 70%.
 Closing work-in-progress - 2,500 Units
 Degree of Completion: Material - 100%, Labour - 80% and Production overheads - 80%.
 Units transferred to the next process - 19,500 Units
- Normal process loss is 10% of total input (opening stock plus units put in). Scrap value is ₹ 3.00 per unit. The company follows FIFO method of inventory valuation.
- You are **required** to: -
- Prepare statement of equivalent production
 - Prepare statement of cost per equivalent unit for each element and cost of abnormal loss, closing work-in-progress and units transferred to next process' and
 - Prepare process I account.

(10 Marks)

- (B)** In a manufacturing unit, raw materials passes through four Process I, II, III and IV and the output of each process is the input of the subsequent processes. The loss in the four processes I, II, III and IV are respectively 25%, 20%, 20% and $16\frac{2}{3}\%$ of the input. If the end product at the end of Process IV is 40,000 kg what is the quantity of raw material required to be fed at the beginning of Process I and the recovery rate cost of same if purchase price is ₹ 50 per kg.

(4 Marks)

- Q.9 (A)** Y Ltd. Manufactures "Product M" which required three types of raw materials – "A", "B" & "C". Following information related to 1st quarter of the F.Y. 2022-23 has been collected from its books of accounts. The standard input required for 1,000 kg of finished product 'M' are as under:

Material	Quantity (Kg.)	Standard Rate per Kg. (₹)
A	500	25
B	350	45
C	250	55
	1100	
Standard Loss	100	
Standard Output	1000	

During the period, the company produced 20,000 kg product 'M' for which the actual quantity of materials consumed and purchase prices are as under:

Material	Quantity (Kg.)	Purchase Price per Kg. (₹)
A	11,000	23
B	7,500	48
C	4,500	60

You are required to calculate:

- (i) Material Cost Variance
- (ii) Material Price Variance
- (iii) Material Usage Variance
- (iv) Material Yield Variance applying output Method

Note: Indicate the nature of variance i.e. Favourable or Adverse.

(9 Marks)

(B) Briefly explain the limitations of Standard Costing

(5 Marks)

Q.10 (A) A manufacturing company has an installed capacity of 1,50,000 units per annum. Its cost structure is given below: -

Particulars	Amount (₹)
Variable cost per unit - Materials	10
- Labour (subject to a minimum ₹ 1,00,000 per month)	10
-Overheads	4
Fixed overhead per annum	1,92,300
Semi - variable overheads per annum at 75% capacity (it will increase by ₹ 4,000 per annum for increase of every 5% of the capacity utilization or any part thereof)	60,000

The capacity utilization for the next year is budgeted at 75% for the first three months, 80% for the next six months and 90% for the remaining three months. You are **required** to calculate the selling price per unit for the next year, if the company is planning to have a profit of 20% on the selling price.

(9 Marks)

(B) A manufacturing company disclosed a net loss of ₹ 48,700 as per their cost accounting records for the year ended 31-03-2018. However, their financial accounting records disclosed a net profit of ₹35,400 for the same period. A scrutiny of data of both the sets of books of accounts revealed **following** information:

Factory overhead under absorbed - ₹ 30,500	Obsolescence loss charged in financial accounts - ₹ 20,700
Administration overhead over absorbed - ₹ 65,000	
Depreciation charged in financial accounts - ₹ 2,25,000	Notional rent of own premises charged in cost accounts - ₹ 54,000
Transfer fee (credited in financial accounts) - ₹ 10,200	
Depreciation charged in cost accounts - ₹ 2,70,000	Income tax provision - ₹ 52,400
Value of opening stock	In cost accounts - ₹ 1,38,000 and In financial accounts - ₹ 1,15,000
Value of Closing stock	In cost accounts - ₹ 1,22,000 and In financial accounts - ₹ 1,12,500

Prepare a Memorandum Reconciliation Account by taking costing loss as base. (5 Marks)

Q.11 (A) Zed Limited sells its product at ₹ 30 per unit. During the quarter ending on 31st March, it produced and sold 16,000 units and suffered a loss of ₹ 10 per unit. If the volume of sales is raised to 40,000 units, it can earn a profit of ₹ 8 per unit. You are **required** to calculate: -

- (a) BEP in rupees.
- (b) Profit if the sales volume is 50,000 units.
- (c) Minimum level of production where the company need not to close production if unavoidable fixed cost is ₹ 1,50,000.

(8 Marks)

(B) AK Limited produces and sells a single product. Sales budget for calendar year 2012 by quarters is as: -

Quarters	I	II	III	IV
No. of units to be sold	18,000	22,000	25,000	27,000

The year is expected to open with an inventory of 6,000 units of finished products, and close with inventory of 8,000 units. Production is customarily scheduled to provide for 70% of the current quarter's sales demand plus 30% of the following quarter demand. **Prepare** quantity production budget for the year.

(6 Marks)

- Q.12 (A)** A manufacturing unit has purchased and installed a new machine of ₹ 12,70,000 to its fleet of 7 existing machines. The new machine has an estimated life of 12 years and is expected to realise ₹70,000 as scrap at the end of its working life. Other relevant data are as follows:
- (i) Budgeted working hours are 2,592 includes 300 hours for plant maintenance and 92 hours for setting up of plant.
 - (ii) Estimated cost of maintenance of the machine is ₹ 25,000.
 - (iii) The machine requires a special chemical solution, which is replaced at the end of each week at a cost of ₹ 400 each time.
 - (iv) Four operators control operation of 8 machines and the average wages per person amounts to ₹420 per week plus 15% fringe benefits.
 - (v) Electivity used by the machine during the production is 16 units per hour at a cost of ₹ 3 per unit. No current is taken during maintenance and setting up.
 - (vi) Departmental and general works overhead allocated to the operation during last year was ₹50,000. During the current year it is estimated to increase 10% of this amount.
- Calculate machine hour rate, if (a) Setting up time is unproductive; (b) setting up time is productive.

(7 Marks)

- (B)** AT Limited an engineering company having 25 different types of automatic machines, furnishes the following data for 2023–24, in respect of machine 'B':

1. Cost of the Machine (Life 10 years)	= ₹ 5,000
2. Overhead Expenses are	₹
Factory Rent	= 50,000 p.a.
Heating and Lighting	= 40,000 p.a.
Supervision	= 1,50,000 p.a.
Reserve Equipment for Machine B	= 5,000 p.a.
Area of the Factory	= 80,000 sq. ft.
Area occupied by Machine 'B'	= 3,000 sq. ft.
Power cost 50 paise per hour while in operation.	

- 3. Wages of operator is ₹ 24 per day of 8 hours including all fringe benefits. He attends to one machine when it is under set up and two machines while under operation.
- 4. Estimated production hours = 3,600 p.a.
Estimated set up time = 400 hours p.a.

Prepare a schedule of comprehensive machine hour rate and find the cost of the following jobs: -

	<u>Job 1102</u>	<u>Job 1308</u>
Set up time (Hours)	80	40
Operation time (hours)	130	160

(7 Marks)

- Q.13 (1)** Cost Control Vs. Cost Reduction (5 Marks)
- (2)** Costing Accounting Vs. Management Accounting (5 Marks)
- (3)** Controllable Cost Vs. Uncontrollable Cost (4 Marks)