

## COM4CJ204:APPLIED COSTING AND CONTROL

### Section-A-Mark-3

1. *Compute cost of raw material consumed:*

Opening stock of raw materials	<input type="checkbox"/> 10,000
Direct wages	<input type="checkbox"/> 50,000
Closing stock	<input type="checkbox"/> 15,000
Prime cost	<input type="checkbox"/> 1,00,000
Expenses on purchase	<input type="checkbox"/> 5,000

2. *Determine prime cost:*

Direct wages	<input type="checkbox"/> 20,000
Raw materials	<input type="checkbox"/> 50,000
Chargeable expenses	<input type="checkbox"/> 5,000
Carriage inwards	<input type="checkbox"/> 1,500

3. *Calculate factory cost:*

Materials	<input type="checkbox"/> 60,000
Labour	<input type="checkbox"/> 45,000
Factory overheads	<input type="checkbox"/> 13,500
Office overheads	<input type="checkbox"/> 12,850
Sales	<input type="checkbox"/> 1,55,485

4. Using the following information determine the total cost of production.

Materials consumed Rs.25,000  
Wages paid Rs.28,000  
Works overhead 50% on wages  
Office overhead 30% on works cost

5.

Calculate works cost.

Prime cost	<input type="checkbox"/> 2,60,000
Indirect wages	<input type="checkbox"/> 20,000
Factory rent	<input type="checkbox"/> 6,000
Power and fuel	<input type="checkbox"/> 10,000
Depreciation on machinery	<input type="checkbox"/> 12,000

6. From the following particulars abstracted from the books of a contractor, calculate the amount of profit to be credited to P&L account.

Contract price – Rs.50,00,000  
Cash received from contractee being 80% of work certified, Rs.24,00,000  
Work uncertified -Rs.30,00,000  
Notional profit for the year Rs.3,00,000.

1. Kiran undertook a contract for constructing a building on 1<sup>st</sup> Jan 2024 for Shyam. The contract price is Rs.15,0000. He incurred the following expenses: Material consumed Rs.50,000  
Materials in hand at the end Rs.2,000  
Wages Rs.70,000  
Direct expenses Rs.40,000  
Plant purchased Rs.20,000  
The contract was completed on 31<sup>st</sup> Dec 2025. The contract price was duly received. Provide depreciation on 20% p.a on plant and determine profit or loss on the contract.

8. Define costing.
9. Define cost accounting.
10. What is costing?
11. What is cost accounting?
12. Give three differences between costing and cost accounting?
13. Mention any three objective of cost accounting.
14. What is cost in cost accounting? Name any two cost concepts.
15. What is an overhead? How is overhead different from indirect expense?
16. What is an overhead? Name any two overheads.
17. Give three examples for factory overheads.
18. Give three examples for office overheads.
19. Give three examples for selling overheads.
20. Give three examples for distribution overheads.
21. Differentiate between direct expenses and indirect expenses. Give two examples for each.
22. How is cost of production different from cost of sales.
23. What is a cost unit? What is the cost unit in hotels and textiles?
24. Classify the following cost units into simple and composite cost units: a) per litre  
b) per patient per day c) per square feet
25. What is a cost object? Give two examples.
26. Bring out any three differences between cost object and cost unit.

- 28. Define a cost centre.
- 29. What is a profit centre?
- 30. What is a cost sheet?
- 31. State any three purposes of a cost sheet.
- 32. What is primary cost? How is it different from works cost?
- 33. Mention any three cost that are not included in cost sheet.
- 34. What is the difference between cost of goods sold and cost of sales?
- 35. What is job costing?
- 36. Give any three features of job costing.
- 37. Name any three organisations where job costing can be applied.
- 38. What is batch costing?
- 39. Name any three organisations where batch costing can be applied.
- 40. Give any three features of batch costing.
- 41. What is EBQ?
- 42. What are set up costs and carrying costs in EBQ?
- 43. What is contract costing?
- 44. Give any three features of contract costing.
- 45. Name any three organisations where contract costing can be applied.
- 46. What is work certified in contract costing?
- 47. What is work uncertified in contract costing?
- 48. What is retention money in contract costing?
- 49. What is cost plus contract?
- 50. What is de-escalation clause?
- 51. What is escalation clause?
- 52. What is a sub- contract?

- 53. What is process costing?
- 54. Give any three features of process costing.
- 55. Name any three organisations where process costing can be applied.
- 56. Give any three differences between normal process loss and abnormal process loss.
- 57. What is abnormal process gain? How is it treated in process account?
- 58. What is abnormal process loss? How is it treated in process account?
- 59. What is normal process loss? How is it treated in process account?
- 60. What are joint products? Give an example for joint products.
- 61. Give any three features of joint products.
- 62. Give any three differences between joint products and co-products.
- 63. What do you mean by apportionment of joint costs?
- 64. What are main products and by-products?
- 65. Differentiate between by-product and scrap.
- 66. What is equivalent production?
- 67. How would you treat abnormal loss in statement of equivalent production?
- 68. How would you treat normal loss in statement of equivalent production?
- 69. What is service costing?
- 70. Name any three organisations where service costing can be applied.
- 71. How would you classify costs in transport costing?
- 72. What are standing charges and running charges in transport costing?
- 73. What is standard cost? What are its constituents?
- 74. What is standard costing?
- 75. What are basic standards?
- 76. What are ideal standards?
- 77. What do you mean by variance analysis in standard costing?

78. What are current standards?

79. What is budgetary control?

80. What is flexible budget?

81. What is master budget?

82. What is performance budgeting?

83. What is ZBB?

84. What is fixed budget?

85. From the following information , calculate total km and passenger km.

No of buses - 6

Days operated in a month - 25

Trips made by each bus - 4

Distance of route - 20 km (one side)

Capacity of the bus - 50 passengers

Normal passengers travelling - 90% of capacity

86. From the following information , calculate total km and passenger km.

No of buses - 5

Days operated in a month - 25

Trips made by each bus - 4

Distance of route - 20 km (one side)

Capacity of the bus - 50 passengers

Normal passengers travelling - 90% of capacity

87. Aruna transport company is running 4 buses between 2 towns which are 50 km apart

Days operated in a month - 30

Trips made by each bus - 1 round trip

Normal passengers travelling - 75% of capacity

Calculate total passenger km.

88. Anjaly transport company carries load from Palakkad to Kozhikode via Kunnamkulam and returns to Palakkad. The distance of Palakkad to Kunnamkulam is 70 kms, Kunnamkulam to Kozhikode 60 km. and Kozhikode to Palakkad 110 km. The truck carries 4 tonne load from Palakkad to Kunnamkulam, Kunnamkulam to Kozhikode 2 tonnes and returns from Kozhikode to Palakkad without load. Calculate the absolute tonne km and commercial tonne km.

89. Following details relating to a transport company:

	Quantity (tons)	Distance (kms)
1 <sup>st</sup> January	50	40
5 <sup>th</sup> January	35	30
10 <sup>th</sup> January	20	70
17 <sup>th</sup> January	10	35
25 <sup>th</sup> January	30	50

If the total cost is Rs.22,050, calculate cost per tonne km.

70. In a timber industry, the milling operations to the split off point during a period amounted to  $\text{₹}63,000$  with the following production:

	Units
A grade timber	2,000
B grade timber	4,000
C grade timber	<u>3,000</u>
	<u>9,000</u>

Apportion the joint cost on average unit cost method.

91. In a timber industry, the milling operations to the split off point during a period amounted to  $\text{₹}72,000$  with the following production:

	Units
A grade timber	3,000
B grade timber	6,000
C grade timber	<u>3,000</u>
	<u>12,000</u>

Apportion the joint cost on average unit cost method.

92. In a timber industry, the milling operations to the split off point per unit of raw material amounted to material Rs. 40,000, labour Rs. 20,000 and overheads Rs. 18,000 with the following production:

	Units
A grade timber	2,000
B grade timber	4,000
C grade timber	<u>3,000</u>
	<u>9,000</u>

Apportion the joint cost on the basis of weight of joint products.

93. In a factory, the joint cost per unit of input amounted to material Rs. 14,000, labour Rs. 5,000 and overheads Rs. 4,000 with the following production:

	Units
A	2,000
B	3,000
C	<u>4,000</u>
	<u>9,000</u>

Apportion the joint cost on the basis of weight of joint products.

94. In a factory, the joint cost amounted to Rs. 50,000 with the following production:

	Units
P	2,000
Q	3,000
R	<u>4,000</u>
	<u>9,000</u>

95. Give any three differences between standard costing and historical costing.

96. What are the constituents of standard cost?

97. Historical costing fails to measure cost deviations. So which technique of costing can be an aid to overcome this limitation of historical costing?

98. Standard costing commences before production. Explain.

99. Why are standard costs known as pre- determined costs?

#### Section-B-Mark-6

1. From the following information relating to the month of January 2010, prepare a cost sheet :

Direct materials consumed	Rs.20,000
Direct wages paid	Rs.15,000
Direct expenses	Rs .5,000
Factory overheads	Rs.8,000
Administration overheads	Rs .5,000
Selling and distribution overheads	Rs .4,000
1,000 units were produced during the period	

2. Using the following information determine the sales revenue.

Materials consumed Rs.15,000  
 Wages paid Rs.18,000  
 Works overhead is 50% on wages  
 Office overhead is 30% on works cost  
 Selling overhead is 10% on works cost  
 Profit is 20% on sales

3. Calculate works cost.

Direct materials	□ 1,20,000
Direct wages	□ 1,40,000
Indirect wages	□ 20,000
Direct expenses	□ 10,000
Factory rent	□ 6,000
Power and fuel	□ 10,000
Depreciation on machinery	□ 12,000
Sundry factory expenses	□ 4,000
General expenses	□ 8,000

4. Calculate cost of production

Material consumed	□ 20,000
Productive wages	□ 16,000
Direct expenses	□ 5,000

Factory supervision	□ 8,000
Power	□ 6,000
Depreciation on machine	□ 6,000
Other factory expenses	□ 1,000
Office salary	□ 18,000
Sundry expenses	□ 4,000
Rent and rates (Office)	□ 8,000

5. Prepare cost sheet:

Direct materials	Rs. 2,00,000
Factory expenses	Rs. 1,20,000
Prime cost	Rs. 4,10,000
Office expenses	Rs. 90,000
10% output is in stock	
Total sales	Rs. 6,50,000

6. The information given below has been taken from the cost records of a factory in respect of Job No:707

Direct material – Rs. 4010

Dept - A : 60 hours @ 3 per hour

Dept - B : 40 hours @ 2 per hour

Dept C – 20 hours @ 5 per hour

The variable overheads are as follows:

Dept – A : Rs. 5,000 for 5,000 hours

B : RS.3,000 for 1,500 hours

C : Rs. 2,000 for 500 hours

Fixed expenses are estimated at Rs. 20,000 for 10,000 working hours .Calculate the cost of Job no 707 and the price for the job to give a profit of 25% on the selling price.

7. The following data related to a job No.505:

Materials	□ 50,000
Wages	□ 30,000
Chargeable expenses	□ 10,000

Calculate factory overheads at 20% of wages and office and administrative overheads at 5% of factory cost.

Ascertain the total cost of the job.

8. The following information is extracted from the job ledger of Akash Enterprises in respect of Job No.333.

Materials □ 6,800

Wages 100 hours @ □ 5

Variable overheads incurred for all jobs □ 10,000 for 5,000 labour hours.

Find the profit if the job is billed for □ 9,000.

7. From the following particulars, prepare a cost sheet for Job No.215.

Direct materials used for the job	□ 10,000
Productive wages	□ 12,000
Direct expenses	□ 800

Charge 60% of productive wages for factory overheads and 20% of works cost for office overheads. Profit to be earned on selling price is 20%.

10. From the following particulars , prepare a cost sheet for Job No.105.

Direct materials used for the job	□ 6,000
Productive wages	□ 4,600
Direct expenses	□ 500

Charge 60% of productive wages for works on cost and 12.5% of works cost for office costs.

Profit to be earned on selling price is 15%.

11. 1. The following particulars were taken from the books of Best Constructions Ltd. in respect of Contract No: 303 for the year ended 31st December 2025.

Contract price	Rs 8,00,000
Materials supplied from stores	Rs 3,00,000
Materials received from other contracts	Rs 30,000
Materials transferred to other contracts	Rs 20,000
Wages paid	Rs 2,50,000
Direct expenses	Rs 25,000
Establishment charges	Rs 20,000
Plant bought	Rs 1,00,000
Value of materials on 31-12-2025	Rs 15,000
Value of plant on 31-12-2025	Rs 70,000

The contract is completed during the year and the price is received in full from the contractee. Prepare Contract account in respect of Contract No: 303.

12. X undertook a contract for 8,50,000, He incurred the following expenses:

Materials purchased	Rs 1,00,000
Materials issued from stores	Rs 2,10,000
Materials transferred from other contracts	Rs 1,10,000
Wages paid	Rs 4,50,000
Plant purchased	Rs 1,20,000
Materials returned to stores	Rs 10,000

The contract was completed within one year and the contract price was received. Materials in hand was Rs. 20,000 and plant in hand was Rs.1,00,000. Prepare contract account.

13. Madhu undertook a contract for constructing a building on 1<sup>st</sup> July 2024 for Sundar. The contract price is Rs.75,000. He incurred the following expenses:

Material consumed	Rs.25,000
Materials in hand at the end	Rs.1,000
Wages	Rs.35,000
Direct expenses	Rs.20,000
Plant purchased	Rs.10,000

depreciation on 10% p.a on plant and charge indirect expenses at 20% on wages. Prepare contract account.

14. The following was the expenditure on a contract for Rs.6,00,000 commenced in February 2025:

Materials	Rs.1,20,000
Wages	Rs.1,64,400
Plant	Rs.20,000
Business charges	Rs.8,600

Cash received on account up to 31<sup>st</sup> December 2025 amounted to Rs.2,40,000 being 80% of work certified; the value of materials on hand on Decemember 31<sup>st</sup> was Rs.10,000. Provide depreciation at 10%. Prepare contract account.

15. The total value of a contract for Rs.2,40,000 the position of the contract in 2025:

Materials	Rs.40,000
Wages	Rs.20,000
Plant	Rs.30,000
Overhead charges	Rs.6,000
Direct charges	Rs.15,000

The plant is to be depreciated at 10%

Cash received on account amounted to Rs.1,20,000 being 80% of work certified. Work uncertified amounted to Rs.7,500 and the value of materials on hand on Dec 31<sup>st</sup> was Rs.3,000. Prepare contract account.

16. Following particulars relate to contract No.101 for the year 2020.

Materials purchased	Rs.75000
Plant installed at cost	Rs.12500
Wages paid	Rs.85500
Wages outstanding on 31 <sup>st</sup> December	Rs.1250
Indirect Expenses	Rs.3750
Materials in hand at the end	Rs.3000

The value of work certified was Rs.180000 of which Rs.135000 had been received. Work uncertified was valued at Rs.5000. The contract price was Rs.300000. Depreciate Plant by 20%. Prepare Contract account.

17. Explain the scope of cost accounting.

18. Explain the relevance of cost accounting.

19. Explain the limitations of cost accounting.

20. Explain the elements of cost.

21. Explain the components of cost.

22. Differentiate between cost centre and cost unit.

23. Differentiate between cost centre and profit centre.

24. State the advantages of a cost sheet.

25. Explain briefly the steps in preparing a cost sheet.

26. Differentiate between batch costing and job costing.

27. Explain the features of job costing.

28. Explain the features of batch costing.

29. Differentiate between contract costing and job costing.

30. Explain the features of contract costing.

31. How would you determine profit on incomplete contract?

32. What are the differences between job costing and process costing?

33. What are the principles in process costing?

34. Explain the advantages and disadvantages of process costing.

35. Differentiate between normal process loss and abnormal process loss.

36. Differentiate between joint products and by- products.

37. Explain the treatment of the following while preparing statement of equivalent production: a) Closing work-in- progress b) normal loss c) abnormal loss

38. Differentiate between historical costing and standard costing.

39. Explain the advantages of standard costing.

40. Explain the disadvantages of standard costing.

41. Differentiate between fixed budget and flexible budget.

42. Differentiate between budgetary control and standard costing.

43. Differentiate between traditional budgeting and performance budgeting.

44. Differentiate between traditional budgeting and zero- based budgeting.

45. Explain the steps in ZBB.

46. From the following data, calculate the cost per km of a vehicle.

Value of vehicle	1,50,000
Road license fee per year	2,500
Insurance per year	500

Driver's wages per month	2,500
Cost of diesel per litre	30
Kms run per litre	8 km
Proportionate charge for tyre and maintenance per km	2
Estimated life	1,50,000 km
Estimate annual mileage	6000 km

47. Goodwin transport company is running 4 buses between 2 towns which are 50 kms apart. Seating capacity of each bus is 40 passengers . The following particulars were taken from their books for April 2024:

Wages of drivers ,conductors and cleaners	48,000
Wages of office and supervisory staff	20,000
Diesel oil and other oils	60,000
Repairs and maintenance	26,000
Taxation and insurance	32,000
Depreciation	62,000
Interest and other charges	40,000
Annual passengers carried were 75% of the seating capacity . All the 4 Buses ran all the days of the month . Each bus made one round trip per Day. Find the cost per passenger km.	

48. Modern transport company which keeps a fleet of lorries supplies the following information:

Kilometers run for April 2025	30,000
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Wages of April	28,000
Petrol ,oil etc. for April	42,000
Original cost of the vehicle	1,00,000
Repairs for the month of April	66,000
Garage rent of April	20,000
License , insurance etc. for the year	72,000

Depreciation to be allowed @20% p.a on original cost . Prepare a statement for April 2020,showing the fixed and variable cost per running kilometre.

49. Atlas transport company supplies the following details in respect of a truck of 5 ton capacity.

Value of vehicle	1,80,000
Estimated life	10 years
Scrap value	12,000
Driver's wages per month	1,000 p.m
Cleaners wages	500 pm
Repairs and maintenance	1,500 p.m
Insurance per year	9,600
Tax	
4,800	
Diesel , oil and grease	30 per trip each way
General supervision charges	12,000 p.a
The truck carries goods to and from the city covering a distance of 50 km each way . On outward trip freight is available to the extent of full capacity and on return 20% of the capacity.	
Assuming that the truck runs on an average 25 days a month, work out:	

b. Rate per ton, per trip that the company should charge if a profit of 50% on freightage is to be earned.

50. Rajadhani company is running 4 buses between 2 towns which are 50 kms apart. Seating capacity of each bus is 40 passengers . The following particulars were taken from their books for April 2024:

Wages of drivers ,conductors and cleaners 2,400  
 salary of office and supervisory staff 1,000  
 Diesel oil and other oils 4,000  
 Repairs and maintenance 800  
 Taxation and insurance 1,600  
 Depreciation 2,600  
 Interest and other charges 2,000  
 Annual passengers carried were 75% of the seating capacity . All the 4 Buses ran 30 days of the month . Each bus made one round trip per Day. Find the cost per passenger km.

51. A transport company supplies the following details in respect of a truck of 5 ton capacity.

Value of vehicle 90,000  
 Estimated life 10 years  
 Driver's wages per month 500 p.m  
 Cleaners wages 500 pm  
 Repairs and maintenance 500 p.m  
 Insurance per year 4,800 p.a  
 Tax 2,400  
 p.a  
 way  
 Diesel , oil and grease 15 per trip each  
 General supervision charges 4,800 p.a  
 The truck carries goods to and from the city covering a distance of 50 km each way . On outward trip freight is available to the extent of full capacity and on return 20% of the capacity.  
 Assuming that the truck runs on an average 25 days a month, work out:

a. Operating cost per ton km

Rate per ton, per trip that the company should charge if a profit of 50% on freightage is to be earned.

52. The Road Transport Company which keeps a fleet of lorries supplies the following information.

Kilometers run for April 30,000 kms  
 Wages of April Rs. 2,000  
 Petrol ,oil and diesel Rs. 4,000  
 Original cost of the vehicle Rs. 1,00,000  
 Depreciation to be charged on 25% p.a on original cost of the vehicle.  
 Repairs for the month of April Rs. 6,000  
 Garage rent for April Rs. 1,000

Prepare a statement for April 2023 showing the fixed and variable cost per running kilometre.

53. From the following data, calculate the cost per km of a vehicle.

Value of vehicle	30,000
Road license fee per year	1,000
Insurance per year	200
Garage rent per year	1,200
Driver's wages per month	400
Cost of diesel per litre	10.80
Kms run per litre	8 km
Proportionate charge for tyre and maintenance per km	0.40
Estimated life	1,50,000 km
Estimate annual mileage	6000 km

54. Compute EBQ for a company using batch costing with the help of the following information:

Annual demand for the component	2,000 units
setting up cost	□100
Cost of manufacturing one component	□200
Rate of interest	5%
Also calculate the interval between two consecutive optimum runs.	

55. Compute EBQ for a company using batch costing with the help of the following information:

Annual demand for the component	4,000 units
setting up cost	□100
Cost of manufacturing one component	□200
Rate of interest	10%

56. Compute with the help of the following information:

Annual demand for the component	24,000 units
Setting up cost	□200 per unit
Carrying cost per unit	0.5%

57. Annual demand of a product is 10,000 units.

Set-up cost per batch = □250  
 Carrying cost per unit per year = □5  
 Calculate Economic Batch Quantity (EBQ).

58. Monthly demand = 2,000 units

Set-up cost per batch = □400  
 Carrying cost per unit per year = □8  
 Calculate EBQ.

59. Annual demand = 18,000 units

Set-up cost per batch = □300  
 Carrying cost per unit per year = □6  
 Calculate:

60. Component MS is made entirely in machines shop number AMS II . Material cost is Rs. 200 per component. Each component takes 6 minutes to produce and the machine operator is paid Rs. 150 per hour. Machine hour rate is Rs.720 per hour. The setting up of the machine to produce the component takes 3 hours for the operator. Prepare cost sheet showing the set up costs and the production costs both in total and per component. Assuming the batch size of 100 components.

61. PQR Component is made entirely in machines shop number AMS II . Material cost is Rs. 200 per component. Each component takes 6 minutes to produce and the machine operator is paid Rs. 150 per hour. Machine hour rate is Rs.720 per hour. The setting up of the machine to produce the component takes 3 hours for the operator. Prepare cost sheet showing the set up costs and the production costs both in total and per component. Assuming the batch size of 150 components.

62. The material cost of a component is Rs. 200 per component. Each component takes 6 minutes to produce and the machine operator is paid Rs. 150 per hour. Machine hour rate is Rs.720 per hour. The setting up of the machine to produce the component takes 3 hours for the operator. Prepare cost sheet showing the set up costs and the production costs both in total and per component. Assuming the batch size of 200 components.

63. Component MS is made entirely in machines shop number AMS II . Material cost is Rs. 400 per component. Each component takes 12 minutes to produce and the machine operator is paid Rs. 150 per hour. Machine hour rate is Rs.1440 per hour. The setting up of the machine to produce the component takes 6 hours for the operator. Prepare cost sheet showing the set up costs and the production costs both in total and per component. Assuming the batch size of 100 components.

64. The material cost of component BHM is Rs. 100 per component. Each component takes 3 minutes to produce and the machine operator is paid Rs. 75 per hour. Machine hour rate is Rs.360 per hour. The setting up of the machine to produce the component takes 1.5 hours for the operator. Prepare cost sheet showing the set up costs and the production costs both in total and per component. Assuming the batch size of 100 components.

65. A product passes through three distinct processes to completion. 500 units are produced in the month of January 2020.

The following information is obtained with respect to the processes:

	Process I	Process II	Process III
Direct materials	4,400	2,000	1,600
Direct Labour	3,000	2,500	2,000

The overhead expenses of the period were  $\square$  1,500 apportioned to the processes on the basis of wages. No work in progress or process stocks existed at the beginning or at the end of the month. Prepare process accounts.

66. From the following figures, show the cost of the three processes of manufacture. The production of each process is passed on to the next process immediately on completion:

	Process A	Process B	Process C

Works Overhead	5,600	5,250	6,000
Production (in units)	36,000	37,500	48,000
Stock, 1 <sup>st</sup> July 2025 (units from the preceding process)		4,000	16,500
Stock, 31 <sup>st</sup> July 2025 (units from the preceding process)		1,000	5,500

67. The information given below is extracted from the cost accounts of a factory producing a commodity in the manufacture of which three processes are involved. Prepare Process Cost Accounts showing the cost of the output and the per unit of each stage of manufacture. The value at which units are to be charged to Process B and Process C is the cost per unit of Process A and A plus B, respectively.

	Process A	Process B
Direct Wages	6,400	12,000
Machine expenses	3,600	3,000
Factory on cost	2,000	2,250
Raw material consumed	24,000	
	Units	Units
Production (Gross)	37,000	
Wastage	1,000	1,500
Stock, 1 <sup>st</sup> July 2025		4,000
Stock, 31 <sup>st</sup> July 2025		1,000

68. The following information was given to you:

5,000 units are transferred to Process B at  $\square 5$  per unit. Other details relating to the process are:

Materials	$\square 14,000$
Labour	$\square 10,000$
Overhead	$\square 7000$

The normal loss has been estimated at 10% of the process input. Units representing normal loss can be sold at  $\square 1$  per unit. Actual production in the process is 4,400 units. The output of Process B is transferred to the finished stock account.

Prepare Process B account .

69. The following information was given to you:

3,000 units are transferred to Process I at  $\square 6$  per unit. Other details relating to the process are:

Materials	$\square 12,000$
Labour	$\square 6,000$
Production Overhead	$\square 4000$

The normal loss has been estimated at 10% of the process input. Units representing normal loss can be sold at  $\square 0.50$  per unit. Actual production in the process is 3750 units. The output of Process I is transferred to Process II account.

10. The following information was given to you:

8,000 units are transferred to Process I at  $\square 5$  per unit. Other details relating to the process are:

Materials	$\square 12,000$
Labour	$\square 6,000$
Production Overhead	$\square 4000$

The normal loss has been estimated at 10% of the process input. Actual production in the process is 8050 units. The output of Process I is transferred to Process II account.

Prepare Process I account .

71. During June 2026, in Process A, 2,000 units were introduced. At the end of the process, 460 units remained as closing work-in-progress, with the following degree of completion: material 75% complete, labour 50% complete, and overheads 50% complete. Calculate effective production.
72. In process A, 2,000 units have been introduced during one month of 2026. Normal loss is estimated at 5% of the input. At the end of the month, 460 units were incomplete. The stage of completion is as follows: Materials 75% complete, Labour 50% complete, overhead 50% complete. Prepare a statement of equivalent production.
73. During January 2026, 2,000 units have been put in Process A. Normal loss is estimated at 5% of input. At the end of the process, 1,400 units were completed and transferred, and 460 units remained as closing work-in-progress. The degree of completion is as follows: Material 75% complete, Labour 50% complete, and Overheads 50% complete. Calculate equivalent production.
74. During January 2026, 2,000 units have been put in Process A. Normal loss is estimated at 5% of input. At the end of the process, 1,500 units were completed and transferred, and 460 units remained as closing work-in-progress. The degree of completion is as follows: Material 75% complete, Labour 50% complete, and Overheads 50% complete. Calculate equivalent production.
75. From the following information given below, prepare a statement of equivalent production:  
Opening work-in-progress in Process B 800units, on which the stage of completion is: material 60%, labour and overhead 40%. Units introduced in Process B: 3,000 units. Completed and transferred 2,800 units.  
Closing work-in-progress-1000 units on which the stage of completion is – material 80%, labour 70% and overhead 70%.
76. A factory producing article X also delivers a by-product Y, which is further processed into a finished product. The joint cost of manufacture is given below:

Materials	$\square 50,000$
Labour	$\square 30,000$
Overhead	$\square 20,000$

Subsequent costs are as follows:

	X	Y
Materials	$\square 30,000$	$\square 15,000$
	$\square 14,000$	$\square 10,000$

50,000       30,000

Selling prices: X-  1,60,000, and Y-  80,000. Estimated profits on the selling price for X and Y are 25% and 20% respectively. Prepare a statement showing the apportionment of joint costs.

77. X YZ Ltd. Manufactures three products- A, B and C. The actual joint expenses of manufacture for a period were  8,000. It was estimated that the profit on each product as a percentage of sales would be 30%, 25% and 15%, respectively. Subsequent expenses were as follows:

	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>
Materials	100	75	25
Direct wages	200	125	50
Overhead	<u>150</u>	<u>125</u>	<u>75</u>
	<u>450</u>	<u>325</u>	<u>150</u>
Sales	6,000	4,000	2,500

Prepare a statement showing the apportionment of the joint expenses of manufacture over different products.

78. A factory producing article A also yields B and C as by-products. The joint cost of manufacture is given below:

Material	<input type="checkbox"/> 10,000
Labour	<input type="checkbox"/> 2,000
Overheads	<u><input type="checkbox"/> 2,000</u>
	<input type="checkbox"/> 12,000

Subsequent costs are as under:

	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>
Materials	1,500	1,300	1,000
Direct wages	200	150	100
Overhead	<u>800</u>	<u>550</u>	<u>400</u>
	<u>2,500</u>	<u>2,000</u>	<u>1,500</u>
Selling Price	30,000	24,000	20,000
Estimated profit on selling prices	30%	25%	20%

Show how you would propose to apportion the joint costs of manufacture.

79. X Ltd. manufactures product A which yields two by-products B and C. In a period the amount spent up to the point of separation was  20,600. Subsequent expenses were:

	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>
Materials	300	200	150
Direct wages	400	300	200
Overhead	<u>300</u>	<u>270</u>	<u>280</u>
	<u>1,000</u>	<u>770</u>	<u>630</u>

Gross sales value of products A, B and C was  15,000,  10,000,  5,000 respectively. It was estimated that

80. From the following information, find out the cost of X and Y being by-products on whose sale a profit of 20% on the selling price is obtained:

	Joint Expenses	Separate Expense
	<input type="checkbox"/> X	<input type="checkbox"/> Y
Material	9,000	2,000
Labour	4,000	800
Expenses	2,000	1,000
		400

Total amount realised by sale of Y was  3,500.

81. The progressive manufacturing company manufactures one main product and two by-products. Data for a month are shown below:

	Main Product	By-product A	By-product B
Sales ( <input type="checkbox"/> )	1,50,000	12,000	7,000
Manufactured cost:			
i) Before separation	<input type="checkbox"/> 75,000	--	--
ii) After separation	23,000	2,200	1,800
Administration cost	<input type="checkbox"/> 12,000	1,500	1,000
Ratio of Distribution of Selling Expenses	85%	10%	5%
Net profit in sales	20%	15%	10%

Assuming no beginning or ending inventories, apportion the joint cost among the main product and the by-products.

82. The yield of a certain process is 80% as to the main product, 15% as to the cost by-product and 5% as to the process loss. The material put in process (5,000 units) cost  23.75 per unit, and all other charges are  14,250, of which power cost accounted for 33.33%. It is ascertained that power is chargeable as to the main product and by-product in the ratio of 10:9. Draw up a statement showing the cost of the by-product.

83. A certain chemical process yields 75% of the material introduced as the main product, 20% as a by-product, 5% being lost. The percentage of material consumed by the main product and by-product is 80:20. The time taken to produce one unit of by-product is half the time taken by the main product. Overheads have been allocated 200% of the wages of each product.

	<input type="checkbox"/>	Units
Raw material	10,000	2,000
Labour	8,500	
Overheads	<u>17,000</u>	
Total	<u>35,500</u>	

Ascertain the cost of two products.

84. Calculate the estimated cost of production of by-products X and Y at the point of separation from the main

Selling price per unit	<input type="checkbox"/> 12	<input type="checkbox"/> 24
Cost per unit after separation from the main product	<input type="checkbox"/> 3	<input type="checkbox"/> 5
Units Produced	500	200

Selling expenses amount to 25% of total work cost, i.e, including both pre-separation and post- separation work cost.

Selling prices are arrived at by adding 20% of the total cost, i.e, the sum of work costs and selling expenses.

85. Standard price  4 per kg

Actual price  6 per kg

Standard quantity 700 kg; actual quantity 650 kg

Calculate material cost variance, material price variance and material variance.

86. The standard material required to manufacture one unit of product X is 20 kg. and the standard price per kg is  3. In the month of November 2024, 400 units of product X were produced by using 7,800 kg. of material at a cost of  24,960. Calculate material cost variance, material price variance and material variance.

87.

The standard material and standard cost of material required for the production of product A is as follows:

Material 2000 kg

Standard price  10 per kg

The actual material data are as follows:

Material used 2,200 kg

Price of material  9.60 per kg

Calculate:

1. Material cost variance
2. Material price variance
3. Material usage variance

88. 1. From the following information calculate:

- a. Material cost variance
- b. Material usage variance
- c. Material price variance separately for A and B

Material	Std. qty	Std. Price	Actual qty.(kg)	Actual price
	Kg.	<input type="checkbox"/>		<input type="checkbox"/>
A	100	4	120	3.75
B	<u>150</u>	5	<u>180</u>	4.50
	<u>250</u>		<u>300</u>	

89. Calculate material mix variance:

Standard	A	10	2
	B	15	3
Actual	A	8	2.50
	B	17	2.50

90. The standard mix for the production of 100 articles in a factory is fixed as follows:

Raw material A 10 units @ ₹10 each  
 B 5 units @ ₹20 each

The actual raw material used for the production of 100 articles is:

Raw material A 11 units @ ₹10 each  
 B 7 units @ ₹20 each

Calculate revised standard quantity and material mix variance.

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

40 tonnes of material X @ ₹45 per tonne  
 60 tonnes of material Y @ ₹30 per tonne

Standard yield is 90% of input

Actual cost for a period is as follows:

45 tonnes of material X @ ₹40 per tonne  
 55 tonnes of material Y @ ₹34 per tonne

Actual yield is 91 tonnes

Calculate material yield variance.

92. The following budget estimates are available from a factory working at 50% of its capacity;

Variable expenses Rs.60000  
 Semi-Variable expenses Rs.20000  
 Fixed expense Rs.10000

Prepare a budget for 75% of the capacity assuming that semi-variable expenses increased by 10% for every 25%.

93. Prepare a flexible budget at 80% and 100% activity on the basis of the following information;

Production at 50% capacity - 5000 units  
 Raw materials - Rs.80 per unit  
 Direct Labour - Rs.50 per unit  
 Expenses - Rs.15 per unit  
 Factory expenses - Rs.50000 (50% variable)  
 Administrative expenses - Rs.60000 (60% variable)

94. The following data are for 60% capacity. Prepare a flexible budget at 80% and 100% capacities;

Production at 60% capacity - 600 units  
 Material - Rs.100 per unit  
 Labour - Rs.40 per unit  
 Expenses - Rs.10 per unit  
 Factory expenses - Rs.40000 (40% fixed)  
 Administrative expenses - Rs.30000 (60% fixed)

95. The expenses budgeted for production of 10000 units in a factory are furnished below:

Material - Rs.70 per unit  
 Labour - Rs.25 per unit  
 Variable factory overhead - Rs.20 per unit  
 Fixed factory overhead (Rs.100000) - Rs.10 per unit  
 Variable expenses (Direct) - Rs.5 per unit

Administration expenses (Rs.50000) - Rs.5 per unit

Prepare a budget for the production of 8000 units.

96. 1. The expenses budgeted for production of 1000 units in a factory are furnished below:

Material	- Rs.70 per unit
Labour	- Rs.25 per unit
Variable factory overhead	- Rs.20 per unit
Fixed factory overhead (Rs.100000)	- Rs.10 per unit
Variable expenses (Direct)	- Rs.5 per unit
Selling expenses (10% fixed)	- Rs.13 per unit
Distribution expenses (20% fixed)	- Rs.7 per unit
Administration expenses (Rs.50000)	- Rs.5 per unit

Prepare a budget for the production of 600 units.

### Section-C-Mark-10

1. From the following information relating to the year ended 31st December 2009 prepare a cost sheet.

Particulars	01-01-2009	31-12-2009
Stock of raw materials	65,000	76,000
Stock of work-in-progress	18,000	25,000
Stock of finished goods	46,000	42,000
Wages paid		1,30,000
Raw materials purchased		3,15,000
Direct expenses		10,000
Factory overheads		50,000
Administration overheads		32,000
Selling and distribution overheads		30,000

2. From the following particulars prepare a cost sheet for the month of March 2025:

Stock on hand – 1st March	□
Raw materials	26,000
Finished goods	18,300
Work-in-progress	9,200
Stock on hand – 31st March	
Raw materials	27,200
Finished goods	16,700
Work-in-progress	10,100
Purchase of raw materials	23,000
Carriage on purchases	1,500

Indirect wages	1,000
Sale of finished goods	76,000
Chargeable expenses	2,200
Factory overheads	9,500
Administration overheads	4,000
Selling and distribution overheads	5,200

3. From the following production Account for the year ending 31st December 2025

Stock on 1-1-2008:	<input type="checkbox"/>
Raw materials	2,00,000
Work-in-progress	62,000
Finished goods	1,43,000
Stock on 31-12-2008:	
Raw materials	2,47,000
Work-in-progress	69,000
Finished goods	80,000
Purchase of raw materials	1,70,000
Direct wage	1,30,000
Indirect wages	10,000
Factory expenses	75,000
Administration expenses	30,000
Selling expenses	32,000
Sales	5,80,000

4. From the following information prepare a Statement of cost for year 2025.

Particulars	<input type="checkbox"/>
Material consumed	2,00,000
Productive wages	1,60,000
Direct expenses	10,000
Indirect wages	20,000
Factory supervision	8,000
Power and fuel	8,000
Depreciation of machine	12,000
Other factory expenses	2,000
Office salaries	36,000
Sundry expenses	8,000
Rent and rates (Office)	16,000
Bad debts	4,000
Carriage outward	6,000
Travelling expenses	5,000
Advertising	5,000

5. From the following particulars, prepare a costsheet showing the components of total cost and profit for the year ended 31<sup>st</sup> December 2025.

Stock on 1-1-2025:	<input type="checkbox"/>
Raw materials	25,000
Work-in-progress	8,000

Stock on 31-12-2025:	
Raw materials	26,000
Work-in-progress	9,000
Finished goods	16,000
Purchase of raw materials	32,500
Carriage on purchases	2,000
Productive wages	18,500
Unproductive wages	1,000
Direct expenses	2,500
Factory expenses	8,000
Administration expenses	4,000
Selling & Distribution expenses	3,500
Sale of factory scrap	500
Sale of finished goods	85,000

6. From the following information relating to the manufacture of a standard product during the month of September, 2025, prepare a statement showing cost and profit per unit.

Particulars	Rs
Raw materials used	40,000
Direct wages	24,000
Man hours worked	9500 hours
Machine hour rate	Rs.4 per hour
Office overhead	20% on work cost
Selling overhead	Rs.1 per hour
Units produced	20,000
Units sold	18,000 at Rs.10 per unit

7. The following balances were extracted from the books of a building contractor on December 2025.

Materials purchased	Rs 40,000
Materials issued from stores	Rs 2,00,000
Wages paid	Rs 3,40,000
Direct expenses paid	Rs 10,000
Indirect expenses	Rs 30,000
Plant issued to site	Rs 2,00,000
Wages outstanding on 31-12-2025	Rs 26,000
Direct expenses outstanding on 31-12-2025	Rs 12,000
Materials at site on 31-12-2025	Rs 30,000
Value of work certified	Rs 8,00,000
Cost of work uncertified	Rs 60,000
Cash received from contractee	Rs 6,40,000

The work was started on 1st January 2025. The contract price was agreed at Rs.50,00,000. Materials worth Rs 10,000 were lost by fire at the site. Provide depreciation at 20% p.a and prepare Contract account.

8. Skytop contractors Ltd were engaged on one contract during the year. The contract price was Rs.6,00,000. The trial balance on 31<sup>st</sup> December is given below:

--	--	--

Land and Buildings	Rs.48000	
Bank	Rs 16,500	
Contract Account:		
Materials	Rs 1,12,500	
Plant	Rs 30,000	
Wages	Rs 1,50,000	
Expenses	Rs 15,000	
Cash received (80% of work certified)		Rs 2,40,000

Of the Plant and materials charged to the contract, plant costing Rs.4,500 and materials costing Rs.3,600 were destroyed by fire. On 31st December a plant which cost Rs.6,000 was returned to store. The value of materials on site was Rs.4,500. Cost of uncertified work was Rs.3,000. Charge 10% depreciation on plant. Prepare Contract Account and Balance Sheet.

9. X undertook a contract for Rs. 3000000. Following expenses were incurred during the year:

Materials issued from stores	Rs.200000
Materials purchased	Rs.250000
Plant installed at cost	Rs.250000
Wages paid	Rs.600000
Wages outstanding on 31 <sup>st</sup> December	Rs.240000
Other Expenses	Rs.100000

Of the plant and materials charged to contract, the plant which cost Rs.15000 and the materials costing Rs.100000 were destroyed by fire. Some of the materials costing Rs.20000 were sold for Rs.25000. On 31<sup>st</sup> December the plant which cost Rs. 10000 was returned to the stores. The work certified amounted to Rs.1400000 of which 80% of the same was received in cash. The cost of work done but uncertified was Rs.13500. Charge 10% p.a depreciation on plant. Prepare Contract Account for the year ended 31<sup>st</sup> December.

10. The following balances were extracted from the books of a building contractor on December 2020.

Materials purchased	Rs 86,000
Materials returned to store	Rs.600
Wages paid	Rs 65,000
Direct expenses paid	Rs 8,000
Establishment charges	Rs.4,000
Plant issued to site	Rs 80,000
Value of work certified	Rs 1,90,000
Cost of work uncertified	Rs 7,700
Cash received from contractee	Rs 1,61,500
Wages accrued	Rs.300
Materials in hand	Rs.2,000
Depreciation on plant	Rs.7,000
Prepare contract account:	

11. A contractor started a contract work on 1<sup>st</sup> April 2023. The following was the expenditure on the contract for Rs 600000

Plant installed at cost	Rs.30000
Wages paid	Rs.164000
Other Expenses	Rs.200 00

Cash received on account up to 31-03-2024 amounted to Rs.2,56,000 being 80% of the work certified. Of the plant and materials charged to contract, the plant which cost Rs.5000 and the materials costing Rs.6000 were destroyed by fire. On 31-03-2024 the plant which cost Rs. 4000 was returned to the stores. The cost of work done but uncertified was Rs.3000 and materials costing Rs.3600 were in hand on site. Charge 15% p.a. depreciation on plant. Prepare Contract Account for the year ended and also show relevant items in the Balance sheet.

12. The following information was given to you:

2,000 units are transferred to Process B at  $\square 4$  per unit. Other details relating to the process are:

Materials	$\square 4,000$
Labour	$\square 1,000$
Overhead	$\square 700$

The normal loss has been estimated at 10% of the process input. Units representing normal loss can be sold at  $\square 1$  per unit. Actual production in the process is 1,900 units. The output of Process B is transferred to the finished stock account.

Prepare Process B account, Normal Loss account and Abnormal loss / Abnormal gain account as the case may be.

13. A product of a manufacturing company passes through 2 processes, A and B, then to finished stock. It is ascertained that in each process, normally 5% of the total weight is lost and 10% is scrap, which from processes A and B realises  $\square 80$  per tonne and  $\square 200$  per tonne respectively. The following are the figures relating to both processes:

	Process A	Process B
Materials in tonnes	1,000	70
Cost of material per tonne ( $\square$ )	125	200
Wages ( $\square$ )	28,000	10,000
Manufacturing expenses ( $\square$ )	8,000	5,250
Output in tonnes	830	780

Prepare the process cost accounts showing the cost per tonne of each process. There was no stock or work-in-progress in any process.

14. Product X is obtained after it passes through three distinct processes. The following information is supplied to you:

T-1	P-1	P-2	P-3
-----	-----	-----	-----

Direct wages	18,000	4,000	6,000	8,000
Production Overheads	18,000			

1,000 units at  $\square 6$  per unit were introduced in Process I. Production overhead was to be distributed as 100% on direct wages.

You are required to prepare Process accounts from the following information:

	Actual Output Unit	Normal Loss	Value of scrap per unit $\square$
Process I	950	0	4
Process II	840	0	8
Process III	750	0	10

15. A product passes through 2 distinct processes A and B thereafter to finished stock. From the following information, you are required to prepare the process accounts:

	Process A $\square$	Process B $\square$
Material Consumed	12,000	6,000
Direct Labour	14,000	8,000
Manufacturing Expenses	4,000	4,000
Input in Process A (units)	10,000	.....
Input in value ( $\square$ )	10,000	.....
Output(units)	9,400	8,300
Normal wastage	5%	10%
Value of normal wastage per 100 units	$\square 8$	$\square 10$

16. The following details are extracted from the costing records of an Oil Mill for 3 months ending 31<sup>st</sup> March, 2026. Purchase of 500 tons of Copra costing  $\square 2,00,000$ .

Items	Crushing	Refining	Finishing
Direct Labour	2,500	1,000	1,500
Electric Power	600	360	240
Sundry Materials	100	2,000	0
Repairs	280	330	140
Steam	600	450	450
Factory Expenses	1,320	660	220
Cost of Casks	0	0	7,500
Sacks Sold	400	0	0
	Tons	Tons	Tons
Production	300	250	248

175 tons of Copra residue sold for  $\square 11,000$ . Loss in weight in the crushing process is 25 tons. 45 tons of by-products were obtained in the refining process, valued at  $\square 6,750$ .

17. The standard cost of a chemical mixture is as under.

80 tonnes of material A @ ₦40 per tonne

120 tonnes of material B @ ₦60 per tonne

Standard yield is 90% of input

Actual cost for a period is as follows:

100 tonnes of material A @ ₦30 per tonne

200 tonnes of material B @ ₦68 per tonne

Actual yield is 265 tonnes

Calculate :

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

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

70 tonnes of material A @ ₦40 per tonne

130 tonnes of material B @ ₦60 per tonne

Standard yield is 90% of input

Actual cost for a period is as follows:

100 tonnes of material A @ ₦35 per tonne

150 tonnes of material B @ ₦65 per tonne

Actual yield is 200 tonnes

Calculate :

- 1. Material Cost Variance
- 2. Material Usage Variance
- 3. Material Price Variance
- 4. Material Mix Variance
  
- 5. Material Yield Variance

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

80 tonnes of material A @ ₦20 per tonne

120 tonnes of material B @ ₦30 per tonne

Standard yield is 90% of input

Actual cost for a period is as follows:

100 tonnes of material A @ ₦15 per tonne

200 tonnes of material B @ ₦33 per tonne

Actual yield is 260 tonnes.

Calculate :

- 1. Material Yield Variance
- 2. Material Usage Variance
- 3. Material Price Variance
- 4. Material Mix Variance

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

60 tonnes of material A @  40 per tonne

140 tonnes of material B @  60 per tonne

Standard yield is 90% of input

Actual cost for a period is as follows:

80 tonnes of material A @  30 per tonne

120 tonnes of material B @  65 per tonne

Actual yield is 175 tonnes

Calculate :

1. Material Cost Variance
2. Material Usage Variance
3. Material Price Variance
4. Material Mix Variance
5. Material Yield Variance

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

70 tonnes of material A @  50 per tonne

130 tonnes of material B @  40 per tonne

Standard yield is 90% of input

Actual cost for a period is as follows:

100 tonnes of material A @  55 per tonne

100 tonnes of material B @  38 per tonne

Actual yield is 175 tonnes

Calculate :

1. Material Cost Variance
2. Material Usage Variance
3. Material Price Variance
4. Material Mix Variance
5. Material Yield Variance

22. A factory producing article X also delivers a by-product Y, which is further processed into a finished product. The joint cost of manufacture is given below:

Materials  50,000

Labour  30,000

Overhead  20,000

Subsequent costs are as follows:

	X	Y
Materials	<input type="checkbox"/> 30,000	<input type="checkbox"/> 15,000
Labour	<input type="checkbox"/> 14,000	<input type="checkbox"/> 10,000
Overhead	<input type="checkbox"/> 6,000	<input type="checkbox"/> 5,000

Selling prices: X-  $\square 1,60,000$ , and Y-  $\square 80,000$ . Estimated profits on the selling price for X and Y are 25% and 20% respectively. Prepare a statement showing the apportionment of joint costs and process accounts of X and Y to show the cost of production.

23. A factory producing article P also yields Q and R as by-products. The joint cost of manufacture is given below:

Material	$\square 10,000$
Labour	$\square 2,000$
Overheads	$\underline{\square 2,000}$
	$\square 12,000$

Subsequent costs are as under:

	A $\square$	B $\square$	C $\square$
Materials	1,500	1,300	1,000
Direct wages	200	150	100
Overhead	<u>800</u>	<u>550</u>	<u>400</u>
	<u>2,500</u>	<u>2,000</u>	<u>1,500</u>
Selling Price	30,000	24,000	20,000
Estimated profit on selling prices	30%	25%	20%

Show how you would propose to apportion the joint costs of manufacture and prepare the necessary statements in respect of A, B and C.

24. A factory producing article P also yields Q and R as by-products. The joint cost of manufacture is given below:

Material	$\square 12,000$
Labour	$\square 6,000$
Overheads	$\underline{\square 2,000}$
	$\square 20,000$

Subsequent costs are as under:

	P $\square$	Q $\square$	R $\square$
Materials	1,500	1,300	1,000
Direct wages	200	150	100
Overhead	<u>800</u>	<u>550</u>	<u>400</u>
	<u>2,500</u>	<u>2,000</u>	<u>1,500</u>
Selling Price	42,000	30,000	27,500
Estimated profit on selling prices	20%	20%	25%

Show how you would propose to apportion the joint costs of manufacture and prepare the necessary statements in respect of P, Q and R.

25. The cost of an article at capacity level of 5000 units is given below. For a variation of 25% in capacity above or below this level, the individual expenses vary as indicated below:

Material	- Rs.25000 (100% varying)
----------	---------------------------

Repairs and maintenance	- Rs.2000 (75% varying)
Stores	- Rs.1000 (100% varying)
Inspection	- Rs.500 (20% varying)
Depreciation	- Rs.10000 (25% varying)
Administrative expenses	- Rs.5000 (25% varying)
Selling expenses	- Rs.3000 (50% varying)

Find the unit cost of the product under each individual expense at production levels of 4000 units and 6000 units.

26. From the information given below, prepare flexible budget at 60% and 80% capacities and fix the total overhead rate as percentage on direct wages at these capacities.

At 75% capacity

Variable overhead:

Indirect material	Rs.7500
Indirect Labour	Rs.22500

Semi-variable overheads:

Electricity (40% fixed; 60% fixed)	Rs.37500
------------------------------------	----------

Repairs and maintenance

(80% fixed; 20% variable)	Rs.3750
---------------------------	---------

Fixed overheads:

Salaries	Rs.100000
----------	-----------

Insurance	Rs.5000
-----------	---------

Depreciation	Rs. 25000
--------------	-----------

Estimated direct wages at 75% capacity Rs.40250

27. 1. Prepare a flexible budget for overhead expenses on the basis of the following data and determine the overhead rates at 80% and 90% plant capacity. Plant at 80% capacity are as follows:

Variable overhead:

Indirect Labour	- Rs.12000
-----------------	------------

Stores including spares	- Rs.4000
-------------------------	-----------

Semi-variable overheads:

Power (30% fixed; 70% variable)	- Rs.20000
---------------------------------	------------

Repairs and maintenance (60% fixed; 40% variable)	- Rs.2000
------------------------------------------------------	-----------

Fixed overheads:

Depreciation	- Rs.11000
--------------	------------

Insurance	-Rs.3000
-----------	----------

Salaries	-Rs. 10000
----------	------------

Total overhead - Rs.62000

Estimated direct labour hours - 124,000 hours

28. Following are the budgeted expenses for the production of 10000 units of a product:

Materials	- Rs.75 per unit
Labour	- Rs.15 per unit
Variable overhead	- Rs.20 per unit
Fixed overhead (Rs.100000)	- Rs.10 per unit
Direct expenses (variable)	- Rs.10 per unit
Selling expenses (10% fixed)	- Rs.12 per unit
Distribution expenses (20% fixed)	- Rs.8 per unit

Prepare a budget for 6000 units and 8000 units. Administration expenses are fixed for all levels of production

29. The cost per unit of an article at the capacity level of 10000 units is given below. For a variation above or below this level, the individual expenses vary as indicated against them:

Material (100% varying)	- Rs.60000
Labour (100% varying)	- Rs.40000
Power (80% varying)	- Rs.6000
Repair and maintenance (80% varying)	- Rs.5000
Stores (100% varying)	- Rs.4000
Inspection (25% varying)	- Rs.1000
Depreciation (100% varying)	- Rs.12000
Administration overhead (25% varying)	- Rs.3600
Selling overhead (50% varying)	- Rs.9000
Cost per unit	- Rs.14.06

Find out the unit cost of the product under each individual expense at production levels of 8000 units and 12000 units.

30. 1. The cost per unit of an article at the capacity level of 1000 units is given below. For a variation above or below this level, the individual expenses vary as indicated against them:

Material (100% varying)	- Rs.60000
Labour (100% varying)	- Rs.40000
Power (80% varying)	- Rs.6000
Repair and maintenance (80% varying)	- Rs.5000
Stores (100% varying)	- Rs.4000
Inspection (25% varying)	- Rs.1000
Depreciation (100% varying)	- Rs.12000
Administration overhead (25% varying)	- Rs.3600
Selling overhead (50% varying)	- Rs.9000
Cost per unit	- Rs.15

Find out the unit cost of the product under each individual expense at production levels of 800 units and 1200 units.