MOCK TEST PAPER – II

INTERMEDIATE (IPC): GROUP – I

PAPER – 3: COST ACCOUNTING AND FINANCIAL MANAGEMENT

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answers in Hindi will not be valued.

Question No. **1** is compulsory.

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

Working notes should form part of the answer.

Time Allowed – 3 Hours **Maximum Marks – 100**

1. Answer the following:

(a) The following particulars have been compiled in respect of three workers:

	M	N	O
Actual hours worked	380	100	540
Hourly rate of wages (in ₹)	90	100	110
Productions in units:			
- Product A	210	-	600
- Product B	360	-	1350
- Product C	460	250	-
Standard time allowed per unit of each product is:			
	A	**B**	**C**
Minutes	15	20	30

For the purpose of piece rate, each minute is valued at ₹ 1.50.

You are required to Calculate the wages of each worker under:

(i) Guaranteed hourly rate basis.

(ii) Piece work earning basis but guaranteed at 75% of basic pay (Guaranteed hourly rate if his earnings are less than 50% of basic pay.)

(b) A factory can produce 1,80,000 units per annum at its 60% capacity. The estimated costs of production are as under:

Direct material	₹ 50 per unit
Direct employee cost	₹ 16 per unit
Indirect expenses:	
- Fixed	₹ 32,50,000 per annum

- Variable	₹ 10 per unit
- Semi-variable	₹ 40,000 per month up to 50% capacity and ₹ 15,000 for every 20% increase in the capacity or part thereof.

If production program of the factory is as indicated below and the management desires to ensure a profit of ₹10,00,000 for the year, determine the average selling price at which each unit should be quoted:

First three months of the year- 50% of capacity;

Remaining nine months of the year- 75% of capacity.

(c) XYZ Company's equity share is quoted in the market at ₹ 25 per share currently. The company pays a dividend of ₹ 5 per share and the investor's market expects a growth rate of 5% per year.

You are required to:

(i) Calculate the company's cost of equity capital.

(ii) If the company issues 12% debentures of face value of ₹ 100 each and realises ₹ 95 per debenture while the debentures are redeemable after 10 years at a premium of 12%, calculate cost of debenture using YTM?

Assume tax rate to be 30%.

(d) The capital structure of PS Ltd. for the year ended 31st March, 2021 consisted as follows:

Particulars	**Amount in ₹**
Equity share capital (face value ₹ 10 each)	10,000
10% debentures (₹ 100 each)	1,00,000

During the year 2020-21, sales decreased to 10,000 units as compared to 12,000 units in the previous year. However, the selling price stood at ₹ 12 per unit and variable cost at ₹ 8 per unit for both the years. The fixed expenses were at ₹ 20,000 p.a. and the income tax rate is 30%.

You are required to calculate the following:

(i) The degree of financial leverage at 12,000 units and 10,000 units.

(ii) The degree of operating leverage at 12,000 units and 10,000 units.

(iii) The percentage change in EPS. **(5 Marks × 4 = 20 Marks)**

2. (a) Following information is available regarding process A for the month of October, 2021:

Production Record:

Units in process as on 01.10.2021	8,000
(All materials used, 25% complete for labour and overhead)	
New units introduced	32,000
Units completed	28,000
Units in process as on 31.10.2021	12,000
(All materials used, 33-1/3% complete for labour and overhead)	

Cost Records:

Work-in-process as on 01.10.2021	(₹)
Materials	12,00,000
Labour	2,00,000
Overhead	2,00,000
	16,00,000
Cost during the month	
Materials	51,20,000
Labour	30,00,000
Overhead	30,00,000
	1,11,20,000

Presuming that average method of inventory is used, Prepare:

(i) Statement of Equivalent Production.

(ii) Statement showing Cost for each element.

(iii) Statement of Apportionment of cost.

(iv) Process Cost Account for Process A. **(8 Marks)**

(b) Jensen and spencer pharmaceutical is in the business of manufacturing pharmaceutical drugs including the newly invented Covid vaccine. Due to increase in demand of Covid vaccines, the production had increased at all time high level and the company urgently needs a loan to meet the cash and investment requirements. It had already submitted a detailed loan proposal and project report to Expo-Impo bank, along with the financial statements of previous three years as follows:

Statement of Profit and Loss **(In ₹ '000)**

	2018–19	2019–20	2020–21
Sales			
Cash	400	960	1,600
Credit	3,600	8,640	14,400
Total sales	4,000	9,600	16,000
Cost of goods sold	2,480	5,664	9,600
Gross profit	1,520	3,936	6,400
Operating expenses:			
General, administration, and selling expenses	160	900	2,000
Depreciation	200	800	1,320
Interest expenses (on borrowings)	120	316	680
Profit before tax (PBT)	1,040	1,920	2,400
Tax @ 30%	312	576	720
Profit after tax (PAT)	728	1,344	1,680

Balance Sheet **(In ₹ '000)**

	2018–19	2019–20	2020–21
Assets			
Non-Current Assets			
Fixed assets (net of depreciation)	3,800	5,000	9,400
Current Assets			
Cash and cash equivalents	80	200	212
Accounts receivable	600	3,000	4,200
Inventories	640	3,000	4,500
Total	**5,120**	**11,200**	**18,312**
Equity & Liabilities			
Equity share capital (shares of ₹10 each)	2,400	3,200	4,000
Other Equity	728	2,072	3,752
Non-Current borrowings	1,472	2,472	5,000
Current liabilities	520	3,456	5,560
Total	**5,120**	**11,200**	**18,312**

Industry Average of Key Ratios

Ratio	Sector Average
Current ratio	2.30:1
Acid test ratio (quick ratio)	1.20:1
Receivable turnover ratio	7 times
Inventory turnover ratio	4.85 times
Long-term debt to total debt	24%
Debt-to-equity ratio	35%
Net profit ratio	18%
Return on total assets	10%
Interest coverage ratio (times interest earned)	10

As a loan officer of Expo-Impo Bank, you are required to apprise the loan proposal considering accounts receivable of ₹ 6,00,000 and inventories of ₹ 6,40,000 respectively as on 31st March, 2018. **(8 Marks)**

3. (a) T Ltd manufactures and sells a single product and has estimated sales revenue of ₹ 1,51,20,000 during the year based on 20% profit on selling price. Each unit of product requires 6 kg of material A and 3 kg of material B and processing time of 4 hours in machine shop and 2 hours in assembly shop. Factory overheads are absorbed at a blanket rate of 20% of direct

labour. Variable selling & distribution overheads are ₹ 30 per unit sold and fixed selling & distribution overheads are estimated to be ₹ 34,56,000.

The other relevant details are as under:

Purchase Price:	Material A	₹80 per kg
	Materials B	₹50 per kg
Labour Rate:	Machine Shop	₹70 per hour
	Assembly Shop	₹35 per hour

	Finished Stock	Material A	Material B
Opening Stock	2,500 units	7,500 kg	4,000 kg
Closing Stock	3,000 units	8,000 kg	5,500 kg

Required

(i) Calculate number of units of product proposed to be sold and selling price per unit,

(ii) Prepare Production Budget in units and

(iii) Prepare Material Purchase Budget in units. **(8 Marks)**

(b) A firm can make investment of ₹ 10,00,000 in either of the following two projects. The firm anticipates its cost of capital to be 15% and the net (after tax) cash flows of the projects for five years are as follows:

Year	1	2	3	4	5
Project-A	1,70,000	4,00,000	4,80,000	4,40,000	1,40,000
Project-B	9,00,000	2,00,000	1,40,000	60,000	40,000

The discount factors are as under:

Year	0	1	2	3	4	5
PVF (15%)	1	0.8696	0.7561	0.6575	0.5718	0.4972
PVF (20%)	1	0.8333	0.6944	0.5787	0.4823	0.4019
PVF (30%)	1	0.7692	0.5917	0.4552	0.3501	0.2693

Required:

(i) Calculate the NPV and IRR of each project.

(ii) State with reasons which project you would recommend.

(iii) Explain the inconsistency in ranking of two projects. **(8 Marks)**

4. (a) The following account balances and distribution of indirect charges are taken from the accounts of a manufacturing concern for the year ending on 31st March, 2021:

Item	Total Amount	Production Departments			Service Departments	
	(₹)	X (₹)	Y (₹)	Z (₹)	A (₹)	B (₹)
Indirect Material	5,00,000	80,000	1,20,000	1,80,000	1,00,000	20,000
Indirect Labour	10,40,000	1,80,000	2,00,000	2,80,000	2,40,000	1,40,000
Supervisor's Salary	3,84,000	-	-	3,84,000	-	-
Fuel & Heat	60,000					
Power	7,20,000					
Rent & Rates	6,00,000					
Insurance of Assets	72,000					
Canteen Charges	2,40,000					
Depreciation	10,80,000					

The following departmental data are also available:

	Production Departments			Service Departments	
	X	Y	Z	A	B
Area (Sq. ft.)	4,400	4,000	3,000	2,400	1,200
Capital Value of Assets (₹)	40,00,000	60,00,000	50,00,000	10,00,000	20,00,000
Kilowatt Hours	3,500	4,000	3,000	1,500	-
Radiator Sections	20	40	60	50	30
No. of Employees	60	70	120	30	20

Expenses charged to the service departments are to be distributed to other departments by the following percentages:

	X	Y	Z	A	B
Department A (%)	30	30	20	-	20
Department B (%)	25	40	25	10	-

Prepare an overhead distribution statement to show the total overheads of production departments after re-apportioning service departments' overhead by using simultaneous equation method. Show all the calculations to the nearest rupee. **(8 Marks)**

(b) On 01st April, 2020, the Board of Director of ABC Ltd. wish to know the amount of working capital that will be required to meet the programme they have planned for the year. From the following

information, prepare a working capital requirement forecast and a forecast profit and loss account and balance sheet:

Issued share capital	₹ 6,00,000
10% Debentures	₹ 1,00,000
Fixed Assets	₹ 4,50,000

Production during the previous year was 1,20,000 units; it is planned that this level of activity should be maintained during the present year.

The expected ratios of cost to selling price are: raw materials 60%, direct wages 10% overheads 20%

Raw materials are expected to remain in store for an average of two months before issue to production. Each unit of production is expected to be in process for one month. The time lag in wage payment is one month.

Finished goods will stay in the warehouse awaiting dispatch to customers for approximately three months.

Credit allowed by creditors is two months from the date of delivery of raw materials. Credit given to debtors is three months from the date of dispatch.

Selling price is ₹ 5 per unit.

There is a regular production and sales cycle and wages and overheads accrue evenly.

(8 Marks)

5. (a) Describe briefly, how joint costs up-to the point of separation may be apportioned amongst the joint products under Market value at the point of separation method and Market value after further processing method.

   (b) Discuss the four different methods of costing along with their applicability to concerned industry?

   (c) Distinguish between Operating lease and Financial lease.

   (d) Why money in the future is worth less than similar money today? Give reasons and explain.

(4 × 4 = 16 Marks)

6. (a) JK Ltd. has furnished the following standard cost data per unit of production:

   Material 10 kg @ ₹ 200 per kg.

   Labour 6 hours @ ₹ 110 per hour

   Variable overhead 6 hours @ ₹ 200 per hour.

   Fixed overhead ₹ 90,00,000 per month (Based on a normal volume of 30,000 labour hours.)

   The actual cost data for the month of September 2021 are as follows:

   Material used 50,000 kg at a cost of ₹ 1,05,00,000.

   Labour paid ₹ 31,00,000 for 31,000 hours

   Variable overheads ₹ 58,60,000

Fixed overheads ₹ 94,00,000

Actual production 4,800 units.

Calculate:

(i) Material Cost Variance.

(ii) Labour Cost Variance.

(iii) Fixed Overhead Cost Variance.

(iv) Variable Overhead Cost Variance. **(8 Marks)**

(b) During the financial year 2020-21, KPO Ltd. had total sales of ₹ 250 lakhs of which 64% is on credit. At present, the company is offering credit terms of 2/40, net 120. Of the total, 60% of customer avails the discount and the balance pay in 120 days. Past experience of the company indicates that bad debt losses are around 2% of credit sales. The company spends about ₹ 3,00,000 per annum to administer its credit sales. These costs may be avoided if a factor is prepared to buy the firm's receivables. However, the factor will charge 3% commission and will pay advance against receivables to the company at an interest rate of 18% after withholding 5% as reserve.

(i) What is the effective cost of factoring? Consider number of days in a year as 360 days.

(ii) If bank finance for working capital is available at 12% interest, should the company avail of factoring service. **(8 Marks)**

7. Answer any **four** of the following:

(a) Explain notional profit and retention money in contract costing.

(b) Distinguish between Fixed and Flexible budget.

(c) Explain in brief the assumptions of Modigliani-Miller theory.

(d) Discuss emerging issues affecting the future role of Chief Financial Officer (CFO).

(e) Explain in brief the following:

(i) Profit centres and investment centres.

(ii) Trading on equity

(4 × 4 =16 Marks)