



FINANCIAL MANAGEMENT AND BUSINESS DATA ANALYTICS

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option from the four alternatives given:

[15 × 2 = 30]

- (i) Time value of money facilitates comparison of cash flows occurring at different time periods by _____.
- A. compounding all cash flows to a common point of time
 - B. discounting all cash flows to a common point of time
 - C. using either (A) or (B)
 - D. neither (A) nor (B)
- (ii) How much amount should an investor invest now in order to receive five annuities starting from the end of this year of ₹ 10,000 if the rate of interest offered by bank is 10% per annum?
- A. ₹40,000
 - B. ₹45,000
 - C. ₹37,900
 - D. None of the above
- (iii) _____ is the annual growth of Investment over a specific period of time.
- A. Perpetuity
 - B. CAGR
 - C. Annuity
 - D. None of the above
- (iv) _____ are the business organizations that act as mobilisers of savings and as purveyors of credit.
- A. Financial Institution
 - B. Banking Institution
 - C. Financial Intermediaries
 - D. Non-Banking Financial Institution
- (v) OASIS committee has given recommendations in the area of
- A. Pension Policy
 - B. Hedge Funds
 - C. Private Equity Funds
 - D. Venture Capital
- (vi) Working Capital Turnover measures, the relationship of Working Capital with:
- A. Fixed assets
 - B. Sales
 - C. Purchases
 - D. Stock



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- (vii) DuPont Analysis deals with:
- A. Analysis of current assets
 - B. Analysis of profit
 - C. Capital budgeting
 - D. Analysis of fixed assets
- (viii) H Ltd. raised a debt of ₹50 lakhs on the terms that interest shall be payable at prime lending rate of bank plus 3%. The prime lending rate of the bank is 7%. Calculate the cost debt assuming that the corporate rate of tax is 35%.
- A. 5.5%
 - B. 6.5%
 - C. 7.5%
 - D. 8.5%
- (ix) Which of the following is the most expensive source of capital?
- A. New equity shares
 - B. New preference shares
 - C. New debts
 - D. Retained earnings
- (x) K Ltd. is considering an investment proposal involving an initial cash outlay of ₹ 20,00,000. The proposal has an expected life of 7 years and zero salvage value. At a required rate of return of 12%, the proposal has a profitability index of 1.182. Calculate the present value of cash inflows. The present value of an annuity of ₹ 1 for 7 years at 12% discount is 4.5638.
- A. ₹ 22,64,000
 - B. ₹ 23,70,000
 - C. ₹ 23,64,000
 - D. ₹ 22,70,000
- (xi) Capital budgeting is a part of:
- A. Investment decision
 - B. Working capital management
 - C. Marketing management
 - D. Capital structure
- (xii) Average collection period is 2 months, cash sales and average receivables are ₹5,00,000 and ₹6,50,000 respectively. The sales amount would be:
- A. ₹40,00,000
 - B. ₹42,00,000
 - C. ₹44,00,000
 - D. ₹48,50,000



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(xiii) A _____ net working capital will arise when current assets exceed current liabilities.

- A. Summative
- B. Negative
- C. Excessive
- D. Positive

(xiv) The probability density function describes:

- A. the characteristics of a non-random variable.
- B. the characteristics of a random variable.
- C. the characteristics of a non-random constant.
- D. the characteristics of a random constant.

(xv) Maps may be used for displaying:

- A. Pin code
- B. Country name
- C. State abbreviation
- D. All of the above

Section – B

(Answer any five questions from the following. Each question carries 14 marks) [5 × 14 = 70]

2. (a) What do you mean by Treasury Bills? Discuss its features. [7]

(b) Briefly discuss the steps of data mining. [7]

3. (a) A Ltd. provides you following information:

(i) Current Ratio	2.5
(ii) Liquid Ratio	1.5
(iii) Proprietary Ratio	
(Fixed Assets/Proprietors' Funds)	0.75
Working Capital	₹ 60,000
Reserves and Surplus	₹ 40,000
Bank Overdraft	₹ 10,000

There is no long-term loan or fictitious assets. As a Cost and Management Accountant you have to calculate Current Assets and Current Liabilities and also calculate Stock Value. [7]



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- (b) From the following summary cash account of P Ltd., prepare a Cash Flow Statement (as per AS 3) using the direct method for the current year ended March 31, 2025.

Summary Cash Account
For the year ended on 31.03.2025

	₹		₹
Opening Cash balance	1,00,000	Payment to suppliers	40,00,000
Issue of Preference Shares	6,00,000	Purchase of furniture	4,00,000
Collection from Customers	56,00,000	Payment of overhead	4,00,000
Sale of machinery	2,00,000	Payment of Salaries	2,00,000
		Payment of taxation	5,00,000
		Dividend paid	1,00,000
		Bank loan repaid	6,00,000
		Closing cash balance	3,00,000
	65,00,000		65,00,000

[7]

4. (a) The income statements of a concern for the year ending on 31st December, 2024 and 2025 are given below. Prepare a Comparative Income Statement. (Figures in ₹ '000)

Particulars	2024	2025
Net sales	1890	2500
Cost of goods sold	1240	1570
Operating expenses:		
Office and administrative expenses	180	210
Selling and distribution expenses	90	104
Non-operating expenses:		
Interest paid	50	70
Income tax	110	120

[7]

- (b) J Ltd. has the following capital structure and after-tax costs for the different sources of funds used:

Source of Funds	Amount. (₹)	Proportion (%)	After-tax Cost (%)
Debt	4,50,000	30	7
Preference Capital	3,75,000	25	10
Equity Capital	6,75,000	45	15
	15,00,000	100	

- (i) As a Cost and Management Accountant you are required to calculate the weighted average cost of capital using book-value weights.

- (ii) J Ltd. wishes to raise further ₹ 6,00,000 for the expansion of the project as below:

Debt	₹ 3,00,000
Preference Capital	₹ 1,50,000
Equity Capital	₹ 1,50,000

Assume that specific costs do not change. Calculate the weighted marginal cost of capital.

[7]



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5. (a) M Ltd. is considering the introduction of a new product. It is estimated that profits before depreciation would increase by ₹ 60,000 each year for first four years and ₹ 30,000 each for the remaining period. An advertisement cost of ₹ 10,000 is expected to be incurred in the first year, which is not included in the above estimate of profits. The cost will be admissible for tax purpose in the first year.

A new plant costing ₹ 1,00,000 will be installed for the production of the new product. The salvage value of the plant after its life of 10 years is estimated to be ₹ 20,000. A working capital investment of ₹ 10,000 will be required in the year of installing the plant and a further ₹ 7,500 in the following year. The company's tax rate is 30% and it claims written down value depreciation at 33.33%. If the company's required rate of return is 20%, should the company introduce the new product? Ignore tax effect on Profit/Loss on sale of asset.

[7]

- (b) P Ltd. requires an initial investment of ₹ 1,00,000. The estimated net cash flow are as follows: (Figures in ₹)

Year	1	2	3	4	5	6	7	8	9	10
NCF	17,500	17,500	17,500	17,500	17,500	20,000	25,000	37,500	25,000	10,000
PVIF 14%)	0.877	0.769	0.675	0.592	0.519	0.456	0.4	0.351	0.308	0.27
PVIF 15%)	0.87	0.756	0.658	0.572	0.497	0.432	0.376	0.326	0.284	0.247

Calculate (i) Pay-back period and (ii) Internal Rate of Return.

[7]

6. (a) The following information has been provided by C Ltd.

Expected production and sales 1,44,000 units.

Analysis of cost and sales

₹

Raw materials 90 per unit

Direct Labour 40 per unit

Overheads 80 per unit

Total costs 210 per unit

Profit 30 per unit

Selling Price 240 per unit

Additional information:

- Raw materials are in stock for 2 months.
- Production process 4 weeks. The degree of completion 50%.
- Finished goods in store 1 month.
- Credit allowed to debtors 2 months.
- Credit allowed by suppliers 1 month.
- Lag in payment of wages and overheads is 1.5 weeks.
- 20% of the output is sold against cash.
- Expected cash to be kept ₹2,00,000.
- Take 52 weeks per annum.

Prepare a statement showing the working capital requirement of the company.

[7]

- (b) D Ltd. has a standard deviation of monthly net cash flows of ₹ 400. Its transaction cost of converting cash into marketable securities is ₹ 5 and the interest is 2% per month. The minimum cash balance required is ₹200. Infer the Upper Limit, Lower Limit and Return Point for the firm.

[7]



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7. (a) H Ltd., is expecting an annual EBIT of ₹ 1 lakh. The company has ₹ 4 lakhs in 10% debentures. The equity capitalization rate is 12.5%. The company decides to raise ₹ 1 lakh by issue of 10% debentures and use the proceeds thereof to redeem equity shares. As a Cost and Management Accountant you are required to calculate the total value of the firm and also the overall cost of capital under the existing and proposed plan. [7]
- (b) K Ltd. has sales of ₹ 75,00,000, variable cost of ₹ 42,00,000 and fixed cost of ₹ 6,00,000. It has a debt of ₹45,00,000 at 9% and equity of ₹ 55,00,000.
Based on the above information, answer the following:
- (i) Calculate firm's ROI?
- (ii) Does it have favourable financial leverage? Examine
- (iii) If the firm belongs to an industry whose asset turnover is 3, does it have a high or low asset leverage? Analyze
- (iv) Calculate the operating, financial and combined leverages of the firm? [7]
8. (a) Describe by Data Ethics? Discuss the five basic principles of Data Ethics that a business organisation should follow. [7]
- (b) Data visualisation helps finance professional in their Analytics efforts. Summarize the point to be kept in mind by finance professional while investigating? [7]