

FOUNDATIONS OF FINANCE

MID- SEM (Monsoon 2024)

Time: 60 minutes

Max. Marks 25

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Instructions for students:

1. For Qs 1 and 2 write only the answers in the answer sheet (no calculations needed)
2. Show all calculations in Qs 3,4 and 5
3. Marks for each question are mentioned alongside.
4. **Make suitable assumptions wherever required and briefly state the same.**
5. **Proper presentation of your work is absolutely essential. Marks may be deducted if presentation is not proper.**

1. A credit card is charging you 3% per month rate of interest on late payments. What is the effective annual rate of interest in percentage that the credit card company is charging? 1 mark

2. a) A recent newspaper article compared the increase in price of gold and increase in flight tickets. It stated:

	1947	2024
Cost of Mumbai Delhi flight	Rs.140	Rs.4400
Cost of 10 gm of gold	Rs. 88.62	Rs.77630

Work out the approximate rate of increase per annum in the flight cost and the cost of gold in the 77 years.

- b) Sensex in 1979 was at 100 points and in 2024 it is 85,000. Calculate the approximate rate of increase per annum in the 45 years

Rate of increase of flight	Rate of increase of gold	Rate of increase of Sensex

3 marks

3. You have recently enrolled for a course “**Foundations of Finance**” and have learnt about time value of money. Armed with that knowledge you want to suggest a financial plan to your uncle. Your uncle is 50 years old and will retire in 10 years. Life expectancy for a 50-year-old is 85 years. He wants a retirement income of Rs.900,000 per annum growing at the rate of 5% per annum. His retirement income will begin the day he retires, 10 years from today and will continue for another 24 years. He will receive the retirement amount for the full year at the beginning of each year. He currently has Rs.15 Lakhs saved and he expects to earn 10% annually on his savings. How much must he save during each of the next 10 years (end of year deposits) to meet his retirement goals?

8 marks

4. The balance sheet and income statement of Company ABC Ltd. is given below. Calculate the indicated ratios. Format of answer is given. **9marks**

Balance sheet of ABC Ltd. as on Dec 31, 2022 (in millions)				Income Statement of ABC Ltd. year ended Dec31, 2023 (in millions)	
Cash	77.5	Accounts Payable	129	Sales	1607.5
Receivables	336	Notes Payable	84	Cost of Goods Sold	1351
Inventories	241.5	Other current liabilities	117	Depreciation	41.5
				Selling Expenses	115
Net fixed assets	292.5	Long term debt	256.5	Other expenses	30
		Common Equity	361	EBIT	70
				Interest	24.5
				EBT	45.5
				Tax (40%)	18.2
				Net Income	27.3

Answer to be given in the following format

		Formula	Figures from the Balance sheet / Income Statement	Value
A	Current Ratio			
B	Quick Ratio			
C	Days sales outstanding			
D	Inventory Turnover Ratio			
E	Total Assets Turnover			
F	Profit Margin			
G	ROA			
H	ROE			
I	Total Debt / Total Assets			

5. **Create the cash flow statement for the ABC Ltd indicating cash from operating, investing and financing activities.** The firm has Rs.100,000 in the bank at the end of the prior year and its working capital accounts except cash remained constant during the year. It earned Rs 5 million in net income during the year but paid Rs.750,000 in dividends. Throughout the year, the firm purchased Rs 5.5 million of machinery that was needed for a new project The depreciation expense for the year is Rs.450,000. The only finance raised by the firm was to issue long term debt of Rs.1 million. **What was the firm's end of year cash balance?** **4 marks**