Daffodil International University

Faculty of Science and Information Technology

Department of Computing and Information System

Final Examination, Fall 2025

Course Code: FIN-232; Course Title: Financial Management System

Sections: 20_A & 20_B **Teacher's Initial: JM**

Time: 2:00 Hrs **Marks: 40**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	Bright Future Ltd. requires funds to finance a new machinery purchase and has entered into a revolving credit agreement with a bank for 4 years. The company has the option to convert the credit into a 3-year term loan at the end of the revolving period.	**[3+3= 6]**

- The bank charges 4% above the prime rate for revolving credit and 2.5% above the prime rate for the term loan.
- A commitment fee of 1% is charged on the unused portion of the loan for both arrangements.
- The prime rate of interest is 8%.

Planned Borrowings:

- Tk. 40,000 at the start of year 1
- Tk. 20,000 at the end of year 2
- Full utilization of the remaining revolving credit at the end of year 4

Planned Principal Repayments for Term Loan:

- Tk. 25,000 at the end of year 5
- Tk. 20,000 at the end of year 6
- Tk. 15,000 at the end of year 7

Required:

a) Calculate the total cost of the revolving credit facility for each year of the agreement and determine the effective interest rate for year 1, year 2, year 3, and year 4.

b) Calculate the total cost of the term loan for each repayment year and determine the effective interest rate for year 5, year 6, and year 7.

2. Following information are for the year of 2025 of Ajan Company- **[6]**

Current assets	2300
Current liabilities	1200
Cash	500
Marketable securities	400
Net receivables	500
Net sales	5600
Average net trade receivables	350
Cost of goods sold (COGS)	3100
Average total inventory	700
Average working capital	600
Average net fixed assets	1900
Average total assets	3600
Net income	900
Average total shareholders' equity	2500
Gross profit	2800
Dividends Paid	350
Interest Expense	200

Calculate the following ratios with interpretation:

- **a)** Quick (acid-test) Ratio
- **b)** Working Capital
- **c)** Receivable Turnover
- **d)** Fixed Asset Turnover
- **e)** Asset Turnover
- **f)** Return on Equity (ROE)

3. Businesses require funds at different stages of their life cycle to operate smoothly and to grow. Discuss how firms meet their financial requirements through internally generated funds and externally raised funds. Explain each source with appropriate real-life business examples. **[8]**

4. Ajan Manufacturing Ltd. is planning to upgrade its machinery and expand production capacity to meet increasing market demand. To finance this expansion, the company approached Pubali Bank Ltd. for intermediate-term financing. After evaluating the project, the bank sanctioned a term loan of Tk. 80 lakh at an annual interest rate of 12%, repayable over a period of 4 years. **[4+6= 10]**

- **a)** Prepare the loan amortization schedule assuming the loan is repaid under the **Balloon Method**.
- **b)** Prepare the loan amortization schedule assuming repayment is made under the **Capital Recovery Method**.

5. **(a) Investment Analysis:** [6+4= 10]

A firm is considering three possible market conditions for a new project. The probabilities and expected returns under each scenario are as follows:

Scenario	Probability	Expected Return
A	0.35	10%
B	0.45	14%
C	0.20	12%

Required:

(i) Calculate the expected return of the project.
(ii) Compute the standard deviation of returns.
(iii) Determine the coefficient of variation (CV) and comment on which scenario is relatively riskier per unit of return.

(b) Required Rate of Return and Investment Preference:

Two investment options, P and Q, are being evaluated. The relevant data is:

Investment	Risk-Free Rate	Market Return	Systematic Risk
P	6%	10%	1.3
Q	5%	12%	1.5

Required:

(i) Calculate the required rate of return for each investment using the CAPM model.
(ii) Based on your calculation, indicate which investment is more suitable for a risk-taker investor.