Answer all (05) Questions
Non-Programmable calculator is permitted
                                                        Time: Three Hours

Briefly explain the **role of Financial Manager** in making **Financial Management Decisions** of an organization.

(03 Marks)

If Mr. X invests in a saving bank account Rs. 20,000 at 10 percent interest compounded annually. **How much he will receive in three years?**

(02 Marks)

Mr. Ravi deposits Rs. 5,000 at the end of every year for 5 years in his saving account paying 5 percent interest compounded annually. He wants to determine **how much sum of money he will have at the end of the fifth year?**

(03 Marks)

Company ABC purchases a machinery for Rs.800, 000 by making a down payment of Rs.150, 000 and remainder in equal installments of Rs.150, 000 for six years. **What is the rate of interest of the company?**

(05 Marks)

Suppose your Father gave you Rs. 10000 on your eighteenth birthday. You deposited this amount in a bank at 10 percent rate of interest for five years. **How much future would you receive after five years?**

(04 Marks)

Suppose you borrow Rs. 100,000 from the Bank. You are going to repay the loan by making equal payments for five years. The interest rate on the loan is 10 percent per year.

(i) **Prepare an amortization schedule for the loan.**

(ii) **How much interest will you pay over the life of the loan?**

(08 Marks)

**(Total 25 Marks)**

1

**Q2 a)** Briefly explain **Systematic and Unsystematic risks** by using real examples.

**b)** Consider securities X and Y with the following estimates:

$E(R_x) = 5\%$                                      $E(R_y) = 15\%$

$\sigma_x = 10\%$                                    $\sigma_y = 25\%$

if the portfolio is comprised of 40 percent X and 60 percent Y and if the correlation the returns on X and Y is – 0.25. **what is the portfolio's expected return and risk**

**c)** The XYZ and PQR companies have the following probability distribution of returns

| Economic Conditions | Probability | XYZ | PQR |
|---|---|---|---|
| High Growth | 0.1 | 32 | 30 |
| Normal Growth | 0.2 | 20 | 17 |
| Slow Growth | 0.4 | 14 | 6 |
| Stagnation | 0.2 | -5 | -12 |
| Decline | 0.1 | -10 | -16 |

(i) Calculate the **expected rate of return** and **standard deviation** for the XYZ companies separately.

(ii) Calculate the **coefficient of variation** for both companies.

**d)** Expected return for Market portfolio is 11 percent, risk free rate is 3 percent, secur Y have betas of 1.25 and 0.6 respectively. **What are the expected returns of X and Y**

(Total

Briefly describe the merits and demerits of using Discounted Cash Flow Methods in an organization.

(05 Marks)

The Sweet company is considering two mutually exclusive projects. Both require an initial cash outlay of Rs.100, 000 each and have a life of five years. The company's rate of return 15% and pays tax at 50%. The projects will be depreciated on a straight line basis.

The before taxes earnings expected to be generated by the projects are as follows:

| Year | Project X | Project Y |
|------|-----------|-----------|
| 1 | 50,000 | 40,000 |
| 2 | 30,000 | 20,000 |
| 3 | 30,000 | 30,000 |
| 4 | 30,000 | 50,000 |
| 5 | 30,000 | 50,000 |

You are required to calculate the following s for the project X and Y separately.

(i) **Accounting Rate of Return**

(ii) **Payback Period**

(iii) **Discounted Payback Period**

(iv) **Net Present Value**

(v) **Internal Rate of Return**

(vi) **Which project should be accepted? Justify your answer.**

(12 Marks)

A new machine costing Rs. 100,000 is expected to save the Brick Company Rs. 15,000 per year for 12 years before depreciation and taxes. The machine will be depreciated on a straight-line basis for a 12-year period to an estimated salvage value of zero. The firm's marginal tax rate is 40 percent. **What are the annual net cash flows(NCF) associated with the purchase of this machine? Also compute the initial investment outlay for this** project.

(08 Marks)

(Total 25 Marks)

**Q4** **a)** Briefly explain the **components of cost of capital.**

(03)

**b)** Bond A has an Rs.20000 face value, its semiannual bond with the annual coupon rate of Discount rate 12% and it will be matured by 20 years. **You are required to calculate value of Bond?**

(03)

**c)** Company earns and paid Rs.3 per share as dividend. It's earnings and dividends are en to grow at 15% for 4 years and then at the rate of 8%, the capitalization rate is 18%. W the value of the share today?

(06)

(Total 12 M

**Q5** **a)** Explain the three approaches to determine the cost of equity.

(03)

**b)** A company has on its books the following amount and specific costs of each type of cap

| Type of capital | Book value ( Rs) | Market value ( Rs) | Specific c ( %) |
|---|---|---|---|
| Debt | 400,000 | 380,000 | 15 |
| Preference | 100,000 | 110,000 | 18 |
| Equity | 600,000 | 1,200,000 | 25 |
| Retained earnings | 200,000 | - | 20 |

i. Determine the weighted average cost of capital using (a) book value weights an market value weights.

ii. Can you think of a situation where the weighted average cost of capital would b same using either of weights?

(10 Ma

(Total 13 Ma

**Important Formulas:**

1. $E(R) = \sum\limits_{i=1}^{n} P_i R_i$

2. $\sigma = \sqrt{\sum\limits_{i-i}^{n}\sum (R_i - E(r))^2 P_i}$

3. $C.V = \dfrac{\sigma}{x} \times 100$

4. $E(R_i) = R_f + \beta_j(R_m - R_f)$

5. $WACC = W_d K_d(1-t) + W_p K_p + W_e K_e$

6. $K_e = D1/P_o + g$

7. $FV_{OA} = PMT\left[\dfrac{(1+i)^n - 1}{i}\right]$

8. $PV_{OA} = PMT\left[\dfrac{1-(1+i)^{-n}}{i}\right]$

9. $ARR = \dfrac{\left[\sum_{t=1}^{n} EBIT_t(1-T)\right]/n}{(I_0 + I_n)/2}$

10. $IRR = LR + \dfrac{NPV\,@\,LR}{NPV\,@\,LR - NPV\,@\,HR} \times (HR - LR)$