

Roll No.....

**BBA-505**

**B. B. A. (Semester Fifth)**

**Examination – 2011**

**Paper: Fifth**

**FINANCIAL MATHEMATICS**

Time: Three Hours] [Maximum Marks: 75

[Minimum Marks: 26

**Note: Attempt all questions. All questions carry equal marks.**

1. A financial planner has offered you three possible options for receiving cash flows:

(a) ₹ 12, 750 at the end of the year (Assuming a 12% nominal interest rate compounding half yearly)

(b) ₹ A payment scheme of 8 quarterly payments made over the next two years. The first payment of ₹ 800 is to be made at the end of current quarter. Payments will increase by 20% each quarter the money is to be deposited in an account paying a 12% nominal annual rate, but compounding quarterly. Which of these two plan you would choose.

BBA-505-D-1100

OR

Compute the present value of each of the following cash flows using a discount rate of 12 per cent.

(a) ₹ 4000 cash inflow three years from now.

(b) ₹ 8000 cash inflow at the end of each year for next five year.

(c) ₹ 8000 cash inflow at the beginning of each of next five years.

2. How does compounding and discounting help in determining (a) capital recovery and (b) Sinking Funds

OR

From the following information calculate the present value at 10% discount rate.

Year	0	1	2	3	4	5
Cash flow ₹	(2,000)	3,000	4,000	5,000	6,000	8,000

Suggest whether it should be accepted or rejected

3. Write short notes any three of the following:

- (a) Alpha and its application in investment
- (b) Systematic risk.
- (c) Market portfolio
- (d) Uses of Beta Factor.
- (e) CAPM.

**OR**

Given the risk free rate is 13% and the expected return on the market portfolio is 18%. The following are the expected returns for different stocks.

Stock	Expected Return	%	Expected Beta
(i) HUL	19		1.5
(ii) ABCL	18		0.9
(iii) BILT	17		1.25
(iv) HDFC	18.5		0.75
(v) HDFC	22		1.4

Find out the stocks that are over valued and under valued.

4. (a) Briefly explain the relationship between bond value, required rate of return and coupon rate
- (b) What is the need to study valuation of bonds and stocks for on investors?

**OR**

A share is selling for ₹ 100 on which a dividend of ₹ 6 per share is expected at the end of year. The expected market price after the dividend declaration is to be ₹ 120. Compute the following

- (a) Return on the investment in share
- (b) Dividend yield
- (c) Capital Gain yield
5. Write short notes on following:
- (a) Sinking Funds
- (b) Amortization
- (c) Steps to compute future value of an Annuity Due.

**OR**

HUL raised ₹ 10 lacs for an expansion program from SBI at 7% interest per year. The amount has to be repaid in 12 equal annual installments. Calculate the installment amounts.