payment being due at the end of 6 years. Find the present value of Mr. Amit right at 6% effective. [10]

UNIT-IV

8. XYZ Company has been growing at a rate of 18% per year in recent years. The abnormal growth is expected to continue for another 4 years, then it is likely to grow at a normal rate of 6%. The required rate of return of the investors is 12% and the dividend paid per share last year was Rs. 3. At what price, would the investor be ready to purchase the shares of this company now and at the end of the years 1, 2, 3 and 4 respectively ? [10]

9. Mri Sunil has the following securities. Find out the value of the portfolio, if the yield is 12% appropriate for these bonds : [10]

Bonds	Number	Maturity	Redemption
1. 11% Bonds (Rs. 100 each)	100	5 years	At par
2. 9% Bonds (Rs. 1,000 each)	10	3 years	At par
3. 12% Bonds	100	4 years	At par

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Question Paper Code : 1737

BBA (Semester-II) Examination, 2018

FINANCIAL MATHEMATICS

[BBA-205]

Time : Three Hours] **[Maximum Marks : 70**

Note : Answer **five** questions in **all**. **Question No. 1** is **compulsory**. Besides this, attempt **one** question from each unit. Use of simple calculator is permitted. The candidate are required to answer in serial order only.

1. Answer the following questions : [3x10=30]

   (a) Differentiate between Nominal and Effective Interest Rate.

   (b) Calculate the amount at 6% simple interest of Rs. 1,200 in 9 months.

   (c) Find the present value of Rs. 1,500 in 7 years having a discount rate of 15%.

   (d) What is the relevance of Time value of Money in Financial decision-making ?

(e) What is the present value of Rs. 500 at the rate of interest of 5% per annum payable 5 years hence ?

(f) Distinguish between Annuity Due and Deferred Annuity.

(g) Explain Perpetuity.

(h) Explain yield to Maturity.

(i) Find the value of equity share if :

Dividend is 20% on the equity share of face value of Rs. 100 each and required rate of return of the investor is 15%.

(j) What do you understand by the terms 'Par Value' and 'Coupon Rate' in case of bond valuation ?

UNIT-I

2. A certain amount of money was invested at 6% simple interest and after 9 months an equal amount was invested at 8% simple interest. Find the period in which the amount in each case becomes Rs. 49,000. How much money was invested in each cases ? [10]

3. Find the effective rate of interest equivalent to the nominal rate 9% converted : [10]

(i) Monthly

(ii) Semi-Annually

(iii) Continuously

UNIT-II

4. (a) How the rate of discount and rate of interest is related ? [5]

(b) What is the present value of Rs. 4,000 payable at the end of 7 years at 5% rate of discount, convertible continuously ? [5]

5. A debt of Rs. 5,000 due in 05 years is to be repaid by a payment of Rs. 2,000 now and a second payment at the end of 6 years. How much should be the second payment if the rate of interest is 6% compounded quarterly ? [10]

UNIT-III

6. Calculate the present values of an annuity of Rs. 400 payable at the end of every month, if the first payment is made at the end of 3.5 years and last at the end of 7 years and money is worth 12% per annum compounded monthly. [10]

7. Under a settlement of property Mr. Amit is entitled to receive Rs. 1,800 per annum and infinitum, the first