

## BBA-505(O)

### B. B. A. (Fifth Semester) EXAMINATION, Dec., 2014

(Old Course)

Paper Fifth

FINANCIAL MATHEMATICS

*Time : Three Hours ]*

*[ Maximum Marks : 75*

*[ Minimum Pass Marks : 26*

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

1. Explain the salient features of the 'present value method' of project evaluation and examine its rationality.

*Or*

Calculate the present value of a project requiring an initial investment outlay of ₹ 5,000 and which generates annually over its lifespan ₹ 2,000, ₹ 1,800, ₹ 1,600, ₹ 1,400 and ₹ 1,200, respectively. The discounting rate has been fixed at 10% p. a. Is it a worthwhile project ?

2. Write short notes on any *three* of the following :
  - (a) Market portfolio

- (b) CAPM  
 (c) Annuities  
 (d) Decision tree analysis  
 (e) Alpha and its application in investment
3. Compute the present value of each of the following cash flows using a discount rate of 15 percent :
- (a) ₹ 3,000 cash inflow four years from now.  
 (b) ₹ 8,000 cash inflow at the end of each year for next five years.  
 (c) ₹ 7,000 cash inflow at the beginning of each of next five years.

*Or*

Explain briefly the internal rate of return method. Also explain its merits and demerits.

4. (a) What do you mean by valuation of bonds ?  
 (b) Briefly explain the relationship between bond value, required rate of return and coupon rate.

*Or*

A share is selling for ₹ 200 on which a dividend of ₹ 10 per share is expected at the end of year. The expected market price after the dividend declaration is to be ₹ 260. Compute the following :

- (a) Return on investment in share  
 (b) Dividend yield  
 (c) Capital gain yield

5. A project with capital expenditure of ₹ 15,00,000 is expected to produce the following profits (after deducting depreciation) :

Year	Amount (₹)
I	70,000
II	1,40,000
III	180,000
IV	65,000

You are required to calculate the rate of return.

*Or*

What is sinking funds ? Discuss its significance in financial planning.