Total No. of Pages: 01 Total No. of Questions: 07

## B.Com. (Pro) (Sem.-1<sup>st</sup>) Business Mathematics Subject Code: BCOP-104 Paper ID: [B1104]

Time: 3 Hrs. Max. Marks: 60

## **INSTRUCTIONS TO CANDIDATE:**

- 1. Section A is compulsory. Give answer to each question upto five lines in length. Each question carries two marks.
- 2. Attempt four questions from Section B. Each question carries 10 marks.

## SECTION – A

10X2=20

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- Q.1. Write short notes on the following:
  - a. What is Amortization of a loan?
  - b. What is Arithmetic Progression?
  - c. What is Commission?
  - d. What is Foreign Exchange?
  - e. What is Effective Rate?
  - f. What is Compound Interest?
  - g. What is Yield to Maturity?
  - h. What is B ill Discounting?
  - 1. What is a Bond?
  - J. What is Chain Rule?

## SECTION - B

- Q.2. The sum of the first and the third terms of the geometric progression is 20 and the sum of its first three terms is 26. Find the progression.
- Q.3. Discuss the applications and concept of Ratios and Percentages for modern business world. 10
- Q.4. An insurance agent gets commission of 20% on first year premium, 6% on second and third year's premium and 4% on subsequent years premium on an insurance policy of Rs. 40,000. Annual rate of premium being Rs. 30 per thousand. Find the total earning of the agent for which 5 annual premiums have been paid.
- Q.5. Kaamya purchased a Rs 1,000 bond with a rating of B, paying 14% per year. Tanisha purchased a Rs 1,000 bond with a rating of AAA, paying 5% per year. Andy purchased a Rs. 1,000 junk bond, paying 25% per year. Each bond was to mature in 10 years. Kaamya's B-rated bond paid faithfully for 4 years. Then the company filed for bankruptcy and paid 60 cents on the rupee. Tanisha's AAA rated bonds paid interest during its entire 10 year life and paid face value on maturity. Andy's junk bond paid interest for 3 years. Then the company filed bankruptcy and paid 30 cents on the rupee. Compute how much each investor received for Rs.1,000 investment.
- Q.6. Discuss how we can compute the cost and proceeds of stock buy and sell with suitable examples.
- Q.7. i) What is foreign exchange market and explain its features? Discuss. 5
  - ii) Write a short note on hedging of funds.

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