Roll No.

Total No. of Pages : 02

Total No. of Questions : 07

B.Com.(Professional) (Sem.–1) BUSINESS MATHEMATICS Subject Code : BCOP-104 M.Code : 22004 Date of Examination : 14-01-2023

Time: 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Answer briefly :

- a) Reena is a financial analyst? In December, she received a \$ 600 bonus which was 15% of her monthly salary. What was her monthly salary?
- b) Define the term Yield to Maturity.
- c) Give formula to calculate simple interest and compound interest.
- d) Show with an example how markup percent based on cost calculated.
- e) What is Time value of Money?
- f) What is Amortisation?
- g) What is Promisory note?
- h) Which term of the G.P. 2, $2\sqrt{2}$, 4, ... is 128?
- i) The first term of an A.P. is -4 and 10^{th} term is 14. Determine 30^{th} term.
- j) Ratio. Explain it briefly.

SECTION-B

- 2. a) If p^{th} , q^{th} , r^{th} terms of an A.P. are, *a*, *b*, *c* respectively. Show that (q r) a + (r p) b + (p q) c = 0.
 - b) If *a*, *b*, *c* are three consective terms of an G.P. and *x*, *y*, *z* are three consective terms of an G.P. Then prove that $x^{b-c} y^{c-a} z^{a-b} = 1$.
- 3. A man receives a 9% commission on magazine
 - a) Subscription sales. Last week, his total sales were Rs. 1800. How much commission did he earn?
 - b) A pharmaceutical sales representative receives a 3.5% commission for selling medication to physicians. If he sells Rs. 22,500 of medication, then how much commission will he earn?
- 4. What is rate of exchange? Explain direct rate and indirect rate of exchange.
- 5. Discuss how we can compute the cost and proceeds of stock buy and sell with suitable examples.
- 6. a) What will be the sum invested initially if at 10% per annum compound interest a sum of money accumulates to Rs. 8750 in 4 years.
 - b) Write a note on chain rule (in current of exchange).
- 7. a) Write the steps to calculate the rate of YTM.
 - b) Explain various causes of changes in Exchange Rate.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.