

BACHELOR OF COMMERCE (B.COM)

EXAMINATION: MAY- 2025

FIRST SEMESTER

Subject: Business Mathematics (BCOM23-103/BCOM24-103)

Date: 15/05/2025

Total marks: 60

Time: 10.00 am to 12.30 pm

Instructions: 1) All questions are compulsory. 2) Figures to the right indicate full marks.

Q.1. (A) Fill in the blanks (Any 5)

(05)

1. If Sales Rs.62,000 & Profit Rs 8 000 then Sales : Profit = ...
 - a) 7.75%
 - b) 775%
 - c) 7.55%
 - d) 7.5%
2. What is the main objective of business mathematics?
 - a) To increase expenses
 - b) To minimize profit
 - c) To facilitate business decision-making
 - d) To increase the number of transactions
3. If the cost price of an item is Rs. 500 and the mark- up percentage is 20%, what is the selling price?
 - a) Rs. 550
 - b) Rs. 600
 - c) Rs. 500
 - d) Rs. 700
4. The discount formula is given by:
 - a) Discount= Marked Price - Selling Price
 - b) Discount=Marked Price –Selling Price
 - c) Discount = Cost Price - Selling Price
 - d) Discount=Profit–Loss
5. The profit percentage is calculated as:
 - a) $(\text{Profit} \div \text{Cost Price}) \times 100$
 - b) $(\text{Profit} \div \text{Selling Price}) \times 100$
 - c) $(\text{Cost Price} \div \text{Profit}) \times 100$
 - d) $(\text{Selling Price} \div \text{Profit}) \times 100$
6. If the price of a product increases from Rs. 200 to Rs. 250, what is the percentage increase?
 - a) 10%
 - b) 20%
 - c) 25%
 - d) 30%
7. What is the term used for the cost that does not change with production levels?
 - a) Variable Cost
 - b) Fixed Cost
 - c) Marginal Cost
 - d) Operating Cost

(B) State whether the following statement are true or false (any 5)

(05)

1. Depreciation always increases the value of an asset over time.
2. A higher discount rate results in a higher Present Value of money.
3. In business, a fixed cost remains constant regardless of the level of production.

4. If the cost price is \$500 and the selling price is \$400, the business incurs a loss.
5. The Gross Profit is calculated before deducting operating expenses.
6. The greater the number of compounding periods, the lower the compound interest.

Q.2. (A) A trader allows two successive discounts of 20% and 10% on a product marked at Rs. 5,000. Find the final selling price **(20)**

OR

(B) A sum of Rs. 10,000 is invested at 10% p.a. compound interest for 2 years. Find the compound interest.

Q.3. (A) A trader allows two successive discounts of 20% and 10% on a product marked at Rs. 5,000. Find the final selling price. **(10)**

(B) Solve (Any 2) **(05)**

1. Find the simple interest on Rs. 5,000 for 3 years at an interest rate of 8% per annum
2. The marked price of a product is Rs. 2,500, and a discount of 15% is given. Find the selling price.
3. Saanvi is aware that, in 18 years, her child's education will cost Rs. 40,000. How much would you need to deposit right now to meet her objective if the quarterly compound interest rate on your account is 4%?
4. Calculate the Time Required for Compound Interest with given data -
 Given:-Principal (P) = Rs. 6,000
 Amount (A) = Rs. 7,956
 Rate (R) = 10% per annum

Q.4. (A) Calculate the profit or loss on the 800 college bags sell when shopkeeper sold 600 college bags at 20% profit and the remaining with 25% loss . **(15)**

OR

(B) Mr. Dani takes a loan of Rs. 15,00,000 from a bank for a period of 20 years at 7.5 % with reducing balance . Every month the E.M.I. consists of principal component and interest component . Calculate the EMI of first three months with reducing balance .
