

BACHELOR OF COMMERCE (B.COM)

EXAMINATION: DECEMBER - 2025

FIRST SEMESTER

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

Date: 18/12/2025

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)

- Compound interest on ₹5000 at 10% per annum for 2 years is
 - Rs. 1000
 - Rs. 1050
 - Rs. 1100
 - Rs. 1200
- A person bought goods for Rs. 2500 and sold them for Rs. 3000. His profit percent is
 - 10%
 - 15%
 - 20%
 - 25%
- A commission agent gets 5% commission on sales of ₹80,000. His commission is
 - Rs. 2000
 - Rs. 3000
 - Rs. 4000
 - Rs. 5000
- If a person gets a commission of Rs. 1200 on sales at 4%, then sales are
 - Rs. 30,000
 - Rs. 20,000
 - Rs. 25,000
 - Rs. 40,000
- Which of the following is not an annuity?
 - Fixed annual pension
 - Life insurance premium
 - Lottery winning lump sum
 - Monthly deposit in bank
- If cost price is Rs. 800 and loss is 10%, then selling price =.....
 - Rs. 700
 - Rs. 720
 - Rs. 740
 - Rs. 760
- Brokerage is usually charged on
 - Purchase price only
 - Sale price only
 - Both purchase and sale
 - None of these

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

(05)

1. Profit % is always calculated on selling price.

2. Commission is an expense for seller.
3. Ratio 50 : 100 is equal to 1 : 2.
4. $\text{Loss \%} = (\text{Loss} / \text{Cost Price}) \times 100$.
5. If cost price = selling price, there is neither profit nor loss.
6. The value of annuity decreases when rate of interest increases.

Q.2. (A) A partnership firm has a profit of Rs. 1,20,000. The partners A, B, and C have invested capital in the ratio of 5 : 7 : 8. **(20)**

Questions:

1. Find the share of profit of each partner.
2. If B invests Rs. 70,000, find the capitals of A and C.
3. If A and C decide to reinvest their shares of profit in the ratio 2:3, find how much each will reinvest

OR

(B) A trader purchased goods worth Rs. 80,000. He sells them at a profit of 25% to a wholesaler. The wholesaler spends Rs. 5,000 on transportation and sells the goods to a retailer at a profit of 10%. The retailer pays a broker 2% commission on sales.

Questions:

1. Find the cost price of goods for the wholesaler.
2. Find the selling price of the wholesaler to retailer.
3. Find the brokerage paid by the retailer if he sells goods for Rs. 1,20,000.

Q.3. (A) Calculate compound interest for Rs. 5,000 for 2 years at 8% compounded half-yearly **(10)**

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

1. A person borrowed Rs. 60,000 at 12% compound interest. Find the amount after 3 years.
2. A man loses 12% by selling a chair for Rs. 440. Find the cost price.
3. A commission agent charges 6% on sales. If sales are Rs. 50,000, find commission earned.
4. A man bought an article for Rs. 800 and sold it for Rs. 960. Find his profit %?

Q.4. (A) A company borrowed Rs. 2,00,000 from a bank at 10% p.a. for 3 years. They are given two options: **(15)**

Option A: Repay using simple interest.

Option B: Repay using compound interest (annual compounding).

Questions:

1. Find the total repayment under both options.
2. Find the difference between SI and CI amounts.
3. If the company saves the difference amount in an FD at 8% simple interest for 2 years, how much will it earn?

OR

- (B)** Mr. X invests in shares of a company at face value of Rs. 100 each. Market value of the share is Rs. 120. He buys 800 shares through a broker who charges 1.5% brokerage.

Questions:

1. Find the total cost of investment including brokerage.
2. If the company declares a dividend of 12% on face value, find Mr. X's annual income.
3. Find the effective yield % on his investment.
