

TILAK MAHARASHTRA VIDYAPEETH, PUNE
BACHELOR OF COMMERCE (B.COM)

EXAMINATION: MAY - 2026

FIRST SEMESTER

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

Date: 15/05/2026

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. Business mathematics mainly deals with.....
 - a) Social issues
 - b) Business calculations
 - c) Political studies
 - d) None of these
2. Cash discount is given for.....
 - a) Bulk purchase
 - b) Immediate payment
 - c) Transport
 - d) Storage
3. Compound interest is calculated on.....
 - a) Principal only
 - b) Amount
 - c) Principal + interest
 - d) None
4. Brokerage is related to.....
 - a) Insurance
 - b) Property transactions
 - c) Banking
 - d) Manufacturing
5. An annuity is.....
 - a) Unequal payments
 - b) Random payments
 - c) Equal payments at regular intervals
 - d) One-time payment
6. If CP = ₹500 and SP = ₹600, profit is.....
 - a) ₹100
 - b) ₹200
 - c) ₹50
 - d) ₹150
7. Commission is calculated on.....
 - a) Sales value
 - b) Cost price
 - c) Profit
 - d) Discount

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

(05)

1. Business Mathematics helps in solving business problems using mathematical methods.
2. Percentage means a number expressed out of 100.
3. Ratio compares two quantities of the same kind.
4. In profit and loss, Selling Price = Cost Price + Loss.
5. Trade discount is given to customers for immediate payment
6. Commission is the payment given to agents for selling goods.

- Q.2. (A)** A retail clothing store has marked the price of a jacket at ₹2,000. During a seasonal sale, the store offers a 15% trade discount and an additional 5% cash discount for immediate payment. A customer buys 3 jackets and pays immediately. **(20)**

Questions--

1. Calculate the trade discount per jacket.
2. Find the price after trade discount.
3. Calculate the cash discount amount.
4. Find the final price per jacket.
5. Calculate the total amount paid for 3 jackets.

OR

- (B)** A businessman invests ₹1,00,000 in a bank at 8% annual interest for 3 years.

Questions--

1. Calculate simple interest.
2. Calculate total amount after 3 years.
3. Calculate compound interest for 3 years.
4. Find the difference between simple interest and compound interest.

Explain why compound interest is more beneficial for investors.

- Q.3. (A)** Explain the concept of percentage and its applications in business calculations. **(10)**

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

1. A person invests ₹50,000 at 10% simple interest for 2 years.

Questions

1. Calculate simple interest.
2. Calculate total amount.
3. Which formula is used?
2. The price of a product increased from ₹400 to ₹500. Find the percentage increase.
3. Cost price = ₹800
Selling price = ₹950
Find profit and profit percentage
4. A sales agent sells goods worth ₹80,000 and receives 4% commission.

- Q.4. (A)** Two friends A and B start a business. **(15)**
A invests ₹60,000 and B invests ₹40,000.
After one year, the business earns a profit of ₹50,000.

Questions

1. Find the ratio of investment between A and B.
2. Calculate A's share of profit.
3. Calculate B's share of profit.
4. Explain why ratio is important in partnership business.
5. If partner C joins with ₹50,000, find the new ratio of A : B : C.

OR

- (B)** A company appoints a sales agent who receives 7% commission on total sales. During one month the agent sold products worth ₹3,50,000.

Questions

1. Calculate the commission earned by the agent.
2. If the agent's travel expenses are ₹5,000, find the net income.
3. If sales increase by 20% next month, calculate new sales value.
4. Calculate new commission amount.
5. Explain how commission motivates sales agents.
