



Institute of Management
JK Lakshmipat University
Jaipur

END TERM EXAMINATION



BCom Sem- 1
MM: 50 Marks

Course: Business Mathematics - I
Time: 3 Hours
Subject code: BCH 106

Instructions: Attempt any three questions from Section A. Section B is compulsory.
Use of non-programmable scientific calculator is permitted.

Section A

Q1. A pen drive was sold at a profit of 12%. If the cost price decreases by 10% and the selling price increases by Rs. 80, then the profit is $33\frac{1}{3}\%$. What will be the selling price of the pen drive if it is sold at a profit of 15%?

(10 marks)

Q2. The producer, the wholesaler and the retailer of a laser printer gain 15%, 20% and 25% respectively. If the wholesaler makes a profit of Rs. 690 on each printer, find the cost of producing the printer.

(10 marks)

Q3. A certain sum of money invested on compound interest amounts to Rs. 4320 in two years and Rs. 5184 in three years. Find the rate of interest and the sum invested.

(10 marks)

Q4. You have bought 100 shares at Rs. 55 per share. After some time, you sell 50 shares at Rs. 58 per share. If the brokerage is 1%, find the price at which you should sell the remaining shares to earn a profit of 20% on the original investment.

(10 marks)

Q5. A profit of 30% was made on the selling price of an article after giving 20% trade discount and 10% cash discount. If the article was purchased at Rs. 504, what is the list price of the article?

(10 marks)

P.T.O.

Section B

Q6. XYZ Limited estimates that it will need to purchase machinery worth Rs. 1000,000 five years from now. To accumulate the required amount, it is considering various alternative investments:

Alternative A: Simple interest at 9.5% p.a.

Alternative B: Compound interest at 9% p.a. compounded annually

Alternative C: Compound interest at 8.8% p.a. compounded quarterly

- (a) For each alternative, find the sum it needs to invest today in order to accumulate the required amount of Rs. 1000,000 five years from now. Which alternative will you recommend?

(08 marks)

- (b) Instead of making the entire investment today, XYZ Limited is considering a plan that requires investment of two equal sums: the first sum is invested today and the second sum is invested at the end of one year. Under this investment plan, calculate for each alternative, the sum it needs to invest today in order to accumulate the required amount of Rs. 1000,000 five years from now. Which alternative will you recommend?

(12 marks)