

(Objective Type)

GROUP - 1

(In Words) : _____

Write Serial No. of your answer book _____

Time Allowed : 15 Minutes

Maximum Marks : 10

Signature of Deputy Supdt. _____

Note : Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using a pencil. This paper must be tagged with the answer-book.

1. Some possible answers to each statement are given below. Tick (✓) mark the correct answer : 10

(i) What percent Rs.30 is of 300 : (30% , 20% , 10% , 15%)

(ii) The compound interest for two years at 10% is Rs.4200, the principal is :

(Rs.5000 , Rs.10000 , Rs.15000 , Rs.20000)

(iii) If 60 males do a job in 8 days , how many will require to do the job in 5 days :

(50 , 96 , 86 , 100)

(iv) The domain of the function $f(x) = \frac{1}{x-3}$ is :

({3} , R , $R - \{x|x=3\}$, None of these)

(v) $x^4 - 6x^2 + 10 - \frac{6}{x^2} + \frac{1}{x^4} = 0$ is : (Quadratic equation. Irrational equation.

Exponential equation. Reciprocal equation.)

(vi) A linear equation has always : (Three roots. Two roots. One root. None of these.)

(vii) The determinant of an identity matrix is : (0 , 1 , -1 , $\frac{1}{2}$)

(viii) If A is a matrix of order 2×3 and B is a matrix of order 3×2 then the order of AB is :

(3×3 , 2×2 , 2×3 , 3×2)

(ix) $(10110)_2 + (1000)_2 =$: ($(11000)_2$, $(11100)_2$, $(11110)_2$, $(11011)_2$)

(x) 21 in binary number system is : (10101 , 1011 , 10111 , 10001)

Roll No _____ (To be filled in by the candidate)

(Academic Session 2006 – 2008)

BUSINESS MATHEMATICS 207-(INTER PART – I)

(Essay Type) GROUP – I

Time Allowed : 1.45 hours

Maximum Marks : 40

Note : All questions are/attempted on the answer book.

SECTION – I

2. Write any TWELVE short answers of the following questions :

24

- (i) Define average.
- (ii) Reduce to its lowest term 60 : 180
- (iii) 35 is what percent of 175.
- (iv) Express the following percentage as fraction or decimal 15%.
- (v) What is agent?
- (vi) Find 15% of 10,000.
- (vii) What is meant by interest?
- (viii) Find simple interest on Rs.5000 for 10 years at 8% per annum.
- (ix) Define an equation.
- (x) Write the formula of quadratic equation $ax^2 + bx + c = 0$
- (xi) Define degree of an equation.
- (xii) Define square matrix.
- (xiii) Prove that A is a singular matrix if $A = \begin{bmatrix} 4 & 6 \\ 2 & 3 \end{bmatrix}$

(Turn Over)

2. (xiv) Define variable.
 (xv) What is a linear function?
 (xvi) What is binary system?
 (xvii) Convert $(73)_{10}$ into binary system.
 (xviii) Convert $(1000)_2$ into base 10.

SECTION – II

Note : Attempt any TWO questions.

3. (a) Rs.8000 is enough for 4 persons for 40 days. For how many days Rs.15000 is enough for 5 persons? 4
- (b) A commission agent sent to his principal Rs.3400/- , after deducting 10% of his commission. Find the sale price. 4
4. (a) Draw the graph of following linear equation $\frac{x}{2} + \frac{y}{4} = 12$ 4
- (b) Solve the equation : $\sqrt{2x-1} - \sqrt{x-1} = 1$ 4
5. (a) Solve the given equations by using matrices : 4
- $$\begin{aligned} x + y &= 11 \\ x - y &= 9 \end{aligned}$$
- (b) Evaluate $(11011)_2 \times (10001)_2$ 4