

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

(Academic Sessions 2018 – 2020 to 2021 – 2023)

BUSINESS MATHEMATICS

Q.PAPER (Objective Type)

222-(INTER PART – I)

Time Allowed : 15 Minutes

LHR-22
PAPER CODE = 6646

Maximum Marks : 10

Note : Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1	$\begin{vmatrix} 3 & 4 \\ 2 & 2 \end{vmatrix} = ?$	(A) 0	(B) -1	(C) 2	(D) -2
2	The value of $f(x) = 4x^2 + 100$ at $x = 2$ is :	(A) 116	(B) 108	(C) 106	(D) 104
3	Sum of roots of equation $x^2 - 2x + 3 = 0$ is :	(A) 3	(B) -3	(C) 2	(D) -2
4	$(11)_2$ is equal to :	(A) 2	(B) 5	(C) 4	(D) 3
5	Interest is classified in --- classes :	(A) Two	(B) Three	(C) Four	(D) Five
6	If order of matrix A is 2×3 and order of matrix B is 3×7 , then order of AB is :	(A) 2×7	(B) 3×7	(C) 7×2	(D) 7×3
7	40 is what percent of 400 :	(A) 40%	(B) 30%	(C) 20%	(D) 10%
8	Degree of linear equation is :	(A) 1	(B) 2	(C) 3	(D) 4
9	In binary system 4 is equal to :	(A) $(10)_2$	(B) $(100)_2$	(C) $(11)_2$	(D) $(101)_2$
10	Number of types of proportion is :	(A) Two	(B) Three	(C) Four	(D) Five

54-222-(Objective Type)- 7000 (6646)

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

(Academic Sessions 2018 – 2020 to 2021 – 2023)

BUSINESS MATHEMATICS

(Essay Type)

222-(INTER PART – I)

Time Allowed : 1.45 hours

Maximum Marks : 40

SECTION – I

LHR-22

2. Write short answers to any SIX (6) questions :

12

- (i) Write two uses of ratio.
- (ii) Find mean proportional between 48 and 12.
- (iii) What is difference between cost price and sale price?
- (iv) Write any two applications of annuity in business.
- (v) Find simple interest on Rs.20000 invested for 4 years at the rate $2\frac{1}{2}\%$ annually.
- (vi) Find two consecutive odd integers whose sum is 80.
- (vii) Solve the equation $\frac{3x+2}{4} = \frac{2x+6}{5}$
- (viii) Define reciprocal equation.
- (ix) Solve the quadratic equation by factorization $x^2 - 7x + 12 = 0$

3. Write short answers to any SIX (6) questions :

12

- (i) Define function with example.
- (ii) State the linear equation in standard form with example.
- (iii) Find the sum $(1111)_2 + (1001)_2$
- (iv) Change into decimal form $(1100011)_2$
- (v) Find the product $(1111)_2 \times (11)_2$

3. (vi) If $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}, B = \begin{bmatrix} 4 & 3 \\ 5 & 7 \end{bmatrix}$, find $2A+B$

(vii) Define skew-symmetric matrix.

(viii) If $A = \begin{bmatrix} 4 & 9 \\ 7 & 6 \end{bmatrix}$, find A^{-1}

(ix) If $A = \begin{bmatrix} 3 & 1 \\ 2 & 0 \end{bmatrix}, B = \begin{bmatrix} 4 & -1 \\ 2 & 3 \end{bmatrix}$ prove that $AB \neq BA$

SECTION – II

Note : Attempt any TWO questions.

- 4. (a) The sides of a triangle are proportional to 5 cm, 7 cm and 8 cm. If the perimeter is 270 cm, find the length of each side. 4
- (b) Calculate compound interest when Rs.750 invested for 8 years at 12% per annum. 4
- 5. (a) Draw the graph of the function $y = 3x - 5$ 4
- (b) Solve simultaneous linear equations $2x + y = 5$ 4
 $x + y = 10$
- 6. (a) Use Cramer's rule to solve the system $7x + y = 4$ 4
 $3x - 6y = 8$
- (b) Without converting into decimal system, simplify : 4
 $\{(1011100)_2 - (111100)_2\} - \{(10000)_2 - (1111)_2\}$