

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

(Academic Sessions 2020 – 2022 to 2023 – 2025)

BUSINESS MATHEMATICS

LHR-24

Q.PAPER (Objective Type) 224-1st Annual-(INTER PART – I) Time Allowed : 15 Minutes
Maximum Marks : 10

PAPER CODE = 6642

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	The ratio between 1.5 cm and 4.5 cm is :		
(A) 2 : 5	(B) 3 : 1	(C) 1 : 3	(D) 2 : 3
2	If $40 : 30 :: 20 : x$ then $x =$ --- :		
(A) 15	(B) 10	(C) 20	(D) 25
3	The simple interest on a loan of Rs.300 for 2 years at 7% is :		
(A) Rs.22	(B) Rs.32	(C) Rs.42	(D) Rs.52
4	If $f(x) = x + 8$ then $f(1)$ is :		
(A) 7	(B) 9	(C) 8	(D) 6

(Turn Over)

1-5	If $4x - 6 = 2x + 8$ then $x =$:		
(A) 4	(B) 5	(C) 6	(D) 7
6	A quadratic equation is also called an equation of degree :		
(A) 1	(B) 2	(C) 3	(D) 4
7	8 in binary system is : :		
(A) $(1000)_2$	(B) $(1001)_2$	(C) $(1010)_2$	(D) $(1011)_2$
8	$(1010)_2$ in decimal form is :		
(A) 10	(B) 12	(C) 8	(D) 14
9	$(AB)^t$ is equal to :		
(A) $A^t B^t$	(B) $B^t A^t$	(C) AB^t	(D) $A^t B$
10	The order of the matrix $\begin{bmatrix} 2 & 5 & 8 \end{bmatrix}$ is :		
(A) 3×3	(B) 1×1	(C) 3×1	(D) 1×3

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

(Academic Sessions 2020 – 2022 to 2023 – 2025)

BUSINESS MATHEMATICS

(Essay Type)

224-1st Annual-(INTER PART – I)

Time Allowed : 1.45 hours

Maximum Marks : 40

SECTION – I

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

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- (i) Find the ratio between one hour and 45 minutes.
- (ii) Define inverse proportion.
- (iii) 270 is what % of 900?
- (iv) Find the simple interest on Rs.15000 for one and a half year at 5% annually.
- (v) Define an Annuity Certain.
- (vi) Solve $4x - 3 = 2x + 7$
- (vii) Solve the equation $4(3y - 9) = 7(2 - 5y) + 22y$
- (viii) Solve the equation $5x^2 + 3x = 0$
- (ix) Write down the quadratic formula.

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

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- (i) If $f(x) = 4x - 3$, then find $f(0)$ and $f(1)$.
- (ii) Draw the graph of $y = 2x - 5$
- (iii) Find the value in decimal system $(945)_{10} + (111)_2 = ?$
- (iv) Evaluate $(1101)_2 - (111)_2 = ?$
- (v) Convert 37 into binary number system.

3. (vi) Find AB if $A = \begin{bmatrix} 1 \\ 7 \end{bmatrix}$ and $B = [7 \ 1]$

(vii) Define diagonal matrix, give an example.

(viii) For what value of x the matrix $\begin{bmatrix} 2x & -4 \\ -1 & 2 \end{bmatrix}$ will be singular.

(ix) Show that the inverse of matrix $\begin{bmatrix} 3 & 6 \\ 7 & 14 \end{bmatrix}$ does not exist.

SECTION – II

Note : Attempt any TWO questions.

4. (a) A bus travels 200 km in 3 hours. How much time is needed for a journey of 480 km? 4
- (b) The amount of simple interest for Rs.15,000 for 2 years is Rs.1000. Find the rate of interest. 4
5. (a) Draw a graph defined by the function $y = 2x + 3$ 4
- (b) Solve $8x^2 - 14x - 15 = 0$ by quadratic equation. 4
6. (a) Solve the following system of linear equations by Cramer's rule $3x + 2y = 5$ 4
 $2x - y = 1$
- (b) Evaluate : $\{(1011)_2 + (1101)_2\} + (1001)_2$ 4

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