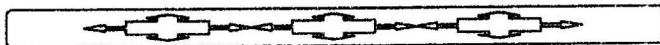




Business Mathematics		L.K.No. 1037	Paper Code No. 6641
Paper I	(Objective Type)	<b>Ist - A - Exam 2023</b>	
Time :	15 Minutes	Inter (Part - I)	(Commerce Group)
Marks :	10	Session (2020 - 22) to (2022 - 24)	

Note : Four possible choices A, B, C, D to each question are given. Which choice is correct fill that circle in front of that Question No. Use Marker or Pen to fill the circles. Cutting or filling two or more circles will result in Zero Mark in that Question.

Q.No.1	1 Hour : 30 Minutes = ?	Bwp-11-23
(1)		(A) 1 : 30 (B) 2 : 30 (C) 2 : 1 (D) 1 : 2
(2)	Rs. 30/- is what percent of 300 :	(A) 30% (B) 10% (C) 20% (D) 15%
(3)	The formula for finding Rate is :	(A) $\frac{I \times 100}{P}$ (B) $\frac{I \times 100}{P \times T}$ (C) $\frac{P \times 100}{I \times T}$ (D) $\frac{T \times 100}{P \times I}$
(4)	If $f(x) = 4x - 3$ , then $f(1) = ?$ :	(A) 9 (B) 5 (C) 1 (D) -3
(5)	If $3x + 2 = 2x + 8$ , then :	(A) $x = 6$ (B) $x = 5$ (C) $x = 4$ (D) $x = 3$
(6)	The solution set of $x^2 + 5x - 6 = 0$ is :	(A) $x = -1, x = -6$ (B) $x = 1, x = -6$ (C) $x = 2, x = 3$ (D) $x = -2, x = -3$
(7)	5 is equal to the number in Binary System :	(A) $(101)_2$ (B) $(100)_2$ (C) $(111)_2$ (D) $(11)_2$
(8)	$(1011)_2$ is equivalent to Decimal Number :	(A) 11 (B) 12 (C) 40 (D) 32
(9)	The order of Matrix $\begin{bmatrix} 2 \\ 5 \end{bmatrix}$ is :	(A) $2 \times 2$ (B) $2 \times 1$ (C) $1 \times 2$ (D) $1 \times 1$
(10)	If $A = \begin{bmatrix} 6 & 9 \\ 12 & 15 \end{bmatrix}$ then $\begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix}$ is :	(A) $3A$ (B) $A$ (C) $A^{-1}$ (D) $\frac{1}{3}A$



B



<b>Roll No.</b>	<b>1037 - 1500</b>	<b>Session</b> (2020 - 22) to (2022 - 24)	<b>Inter ( Part - I )</b>
<b>Business Mathematics</b> <b>(Subjective )</b>	<b>1st - A - Exam</b> <b>2023</b>	<b>Time : 1 : 45 Hours</b> <b>Marks : 40</b>	<b>(Commerce Group)</b>

**Ngte:** It is compulsory to attempt any (6 - 6) Parts each from Q.No. 2 and Q.No.3 while attempt any (2) Questions from Part - II. Write same Question No. and its Part No. as given in the Question Paper.

**Part - I**

*Bwp-11-23*

**12 x 2 = 24**

Q.No.2	(i)	What is Inverse Proportion ?
	(ii)	Find ' x ' if $14 : 19 :: x : 38$
	(iii)	Find the Simple Interest on Rs. 8000/- at 10 % p.a. for 10 years.
	(iv)	The list price of a shirt is Rs. 2250/- and 35 % discount is offered on payment. Find the sale price of the shirt.
	(v)	Solve the equation : $9x + 4 = 4x + 29$
	(vi)	5 % of an amount is Rs.200/- find the amount.
	(vii)	If $2x - 7 = 13$ , find ' x ' .
	(viii)	Solve by Quadratic Formula : $x^2 - 3x - 2 = 0$
	(ix)	Solve $x^2 - 5x - 6 = 0$ by factorization.
Q.No.3	(i)	Show that $f(x) = x^4 + x^2$ is an even or odd function.
	(ii)	If $y = 2x + 1$ , find slope and y - intercept.
	(iii)	Define Binary Number System.
	(iv)	Simplify : $(1001)_2 + (11)_2$
	(v)	Evaluate : $(1110)_2 - (101)_2$
	(vi)	If $A = \begin{bmatrix} 1 & 2 \\ -1 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} -2 \\ 5 \end{bmatrix}$ then find AB
	(vii)	If $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ , $B = \begin{bmatrix} 4 & 3 \\ 5 & 2 \end{bmatrix}$ then find $2A + 3B$
	(viii)	Check the Matrix $\begin{bmatrix} 7 & 2 \\ 4 & 1 \end{bmatrix}$ is Singular or Non - Singular ?
	(ix)	What do you understand by Singular Matrix ?

**Part - II**

**8 x 2 = 16**

Q.No.4	(a)	A batsman score 110 runs which included 4 boundaries and 5 sixes. What percent of his total score did he make by running between wickets ?	(4)
	(b)	The compound interest on Rs. 3 , 00 , 000/- at 7 % per annum is Rs.43,470/- find the period in years.	(4)
Q.No.5	(a)	Find the equation of Straight Line when its slope is -5 and y - intercept is $\frac{4}{5}$	(4)
	(b)	Find the value of x : $\frac{5x - 2}{3x + 1} = \frac{5x - 1}{3x + 2}$	(4)
Q.No.6	(a)	Solve $7x - 3y = 3$ $2x + y = 2$ by using Crammer Rule.	(4)
	(b)	Add $(1101)_2$ to $(110)_2$ and subtract $(1111)_2$ from the Sum.	(4)