Objective
Paper Code
6641

Intermediate Part First
Business Mathematics (Objective)
Time: 15 Minutes   Marks: 10

Q.No.1 You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank. **FBD-22**

S.#	Questions	A	B	C	D
1	The fourth proportional to $1 : 2 :: 3$ is:	2	3	6	5
2	What is the 10% of 40 ?	4	6	5	10
3	The formula to calculate compound interest is:	$P[(1+r)^n - 1]$	$P(1+r)^n + 1$	$P(1-r)^n - 1$	$P(1+r)^n$
4	The reverse of sum of an annuity is called:	Present value	Perpetuity	Ordinary annuity	Future value
5	If $f(x) = 2x^2 + 1$ then $f(x)$ is an:	Odd function	Even function	Constant	Neither even nor odd
6	If eight times a number is 48. What is the number?	4	5	6	3
7	The solution set of an equation $ax + b = 0$ is:	$\dfrac{b}{a}$	$\dfrac{b}{a}$	$\dfrac{a}{b}$	$\pm\dfrac{a}{b}$
8	If $ax^2 + bx + c = 0$ then discriminant is:	$b^2 - 4ac$	$4ac - b^2$	$b^2 + 4ac$	$b^2 - 4a$
9	The binary number $(11)_2$ is equal to the decimal number:	5	3	2	7
10	If the order of a matrix A is 2×3 and of a matrix B is 3×2. What is the order of AB?	3×2	3×3	2×3	2×2

49-XI122-5000

Business Mathematics (Subjective)

Time: 01:45 Hours   · Marks: 40 **F 30-22**

SECTION – I

2. **Write short answers to any SIX parts.**   12
   (i)   What is antecedent and consequent of a ratio?
   (ii)   Define inverse proportion and give its example.
   (iii) What do you know about annuity?
   (iv)   Find 5% of 200.
   (v)   What sum would borrow in Rs. 200 as interest at 5% in 2 years?
   (vi)   Solve for 'x' $\dfrac{9}{x+4} = \dfrac{5}{x-8}$
   (vii) Solve the equation $2x + 8 = 24$
   (viii) Factorize $2x^2 + x - 1 = 0$
   (ix)   Find solution of $x^2 - 3x - 18 = 0$ by completing square method.

3. **Write short answers to any SIX parts.**   12
   (i)   Find the x-intercept and y-intercept of the line $x + 3y = 9$
   (ii)   If $f(x) = 3x^2 + 2x - 1$ then find $f(-2)$ and $f(2)$
   (iii) Convert $(1101)_2$ into decimal system.
   (iv)   Convert 73 into binary system.
   (v)   Simplify $(101)_2 \times (1101)_2$
   (vi)   Define rectangular matrix. Also give an example.
   (vii) If $A = \begin{bmatrix} 4 & 3 \\ 2 & 5 \end{bmatrix}$ find A^2

   (viii) Find the value of x when $\begin{bmatrix} 8 & x \\ 2 & 4 \end{bmatrix}$ is a singular matrix.

   (ix)   Find inverse of A where $A = \begin{bmatrix} 4 & 9 \\ 7 & 6 \end{bmatrix}$

SECTION – II , Attempt any TWO questions. Each question carries 08 marks,

4. (a) If stay of 14 men for 8 days in a hotel cost Rs. 22400. Then find the cost for stay of 7 men for 13 days.   04
   (b) At what rate of compound interest will Rs. 60180 amount to Rs. 100000 in 4 years?   04

5. (a) Find the solution set of the equation by using quadratic formula $x^2 + 11x + 3 = 0$ 04
   (b) Sketch the graph of $4x + 2y = 10$ 04

6. (a) If $A = \begin{bmatrix} 3 & 1 \\ 2 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 4 \\ 8 & 6 \end{bmatrix}$, then find (i) $B + A$ (ii) AB 04
   (b) Simplify: $\{(111000)_2 + (101010)_2\} - (1011)_2$ 04