

Subject :Maths

Topic: Function lecture 4

- Q.1 If $x \in (0, 90^\circ)$ then $[\cos x]$ is (where $[]$ is greatest integer function)
 (A) 0 (B) 1 (C) -1 (D) 2
- Q.2 The function $f : N \rightarrow N$ defined by $f(x) = x - 5 \left[\frac{x}{5} \right]$, where N is set of natural numbers and $[x]$ denotes greatest integer function. Then $f(x)$ can't be
 (A) x (B) $x - 5$ (C) $x + 5$ (D) $x - 1$
- Q.3 Find number of solutions of equation ($[]$ is g IF) $\left[x - 4 \left[\frac{x}{4} \right] \right] = [x] - 4$
 (A) 3 (B) 4 (C) 1 (D) ∞
- Q.4 If $-3(x - [x])^2 + 2(x - [x]) = 0$ then number of solutions of equation in $x \in [0, 4]$ is
 (A) 8 (B) 9 (C) 5 (D) 4
- Q.5 If $\left[\frac{1}{x} \right] = 2$ then-
 (A) $x \in \left(\frac{1}{3}, \frac{1}{2} \right)$ (B) $x \in \left[\frac{1}{3}, \frac{1}{2} \right]$ (C) $x \in \left(\frac{1}{3}, \frac{1}{2} \right]$ (D) None
- Q.6 If $[x] = \{x\}$ (where $[]$ and $\{ \}$ are greatest integer and fractional part function) then
 (A) $x \in [0, 1)$ (B) $x \in I$ (C) $x \in R$ (D) $x = 0$ only
- Q.7 If $[x]$ and $\{x\}$ denote respectively the greatest integer function and fractional part function then number of solutions of equation
 $4\{x\} = x + [x]$ is
 (A) 1 (B) 2 (C) 3 (D) 0
- Q.8 Values of x satisfying $\left[\frac{x^2}{x^2+1} \right] = \{x + 3\}$ is
 (A) $x \in R_0$ (B) $x \in I$ (C) $x \in R - I$ (D) 0
- Q.9 $\{x + n\} = \{x\}$ then the least value of positive integral n is
 (A) 2 (B) 3 (C) 4 (D) 1
- Q.10 $\{2 + \sqrt{3}\}$ is equal to
 (A) $1 - \sqrt{3}$ (B) $\sqrt{3} - 1$ (C) 0 (D) None

Answer Key

Q.	1	2	3	4	5	6	7	8	9	10
A.	A	D	D	B	C	D	B	B	D	B