

1. Domain and range of $f(x) = \frac{|x-3|}{x-3}$ are respectively
 (a) $R, [-1, 1]$ (b) $R - \{3\}, \{1, -1\}$
 (c) R^+, R (d) None of these
2. If in greatest integer function, the domain is a set of real numbers, then range will be set of
 (a) Real numbers (b) Rational numbers
 (c) Imaginary numbers (d) Integers
3. If the domain of function $f(x) = x^2 - 6x + 7$ is $(-\infty, \infty)$, then the range of function is [MP PET 1996]
 (a) $(-\infty, \infty)$ (b) $[-2, \infty)$
 (c) $(-2, 3)$ (d) $(-\infty, -2)$
4. Range of the function $f(x) = \frac{x^2 + x + 2}{x^2 + x + 1}; x \in R$ is [IIT Screening 2003]
 (a) $(1, \infty)$ (b) $(1, 11/7]$
 (c) $(1, 7/3]$ (d) $(1, 7/5]$
5. Range of $f(x) = [x] - x$ is
 (a) $[0, 1]$ (b) $(-1, 0]$
 (c) R (d) $(-1, 1)$
6. The range of the function $f(x) = \frac{x+2}{|x+2|}$ is [RPET 2002]
 (a) $\{0, 1\}$ (b) $\{-1, 1\}$
 (c) R (d) $R - \{-2\}$
7. If $f: R \rightarrow R$, then the range of the function $f(x) = \frac{x^2}{x^2+1}$ is [MP PET 1987]
 (a) R^- (b) R^+
 (c) R (d) $R \times R$
8. Range of $f(x) = \frac{x^2 + 34x - 71}{x^2 + 2x - 7}$ is [Roorkee 1983]
 (a) $[5, 9]$ (b) $(-\infty, 5] \cup [9, \infty)$
 (c) $(5, 9)$ (d) None of these
9. Which of the following function is even function [RPET 2000]
 (a) $f(x) = \frac{a^x + 1}{a^x - 1}$ (b) $f(x) = x \left(\frac{a^x - 1}{a^x + 1} \right)$
 (c) $f(x) = \frac{a^x - a^{-x}}{a^x + a^{-x}}$ (d) $f(x) = \sin x$
10. If $f(x) = \log \frac{1+x}{1-x}$, then $f(x)$ is [Kerala (Engg.) 2002]
 (a) Even function (b) $f(x_1)f(x_2) = f(x_1 + x_2)$
 (c) $\frac{f(x_1)}{f(x_2)} = f(x_1 - x_2)$ (d) Odd function

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	b	d	b	c	b	b	b	b	b	d