

ONE MARK TEST

P. ELANGO VAN, B.T. Assistant (Mathematics)
GOVERNMENT HIGHER SECONDARY SCHOOL
KOLIYANUR – VILLUPURAM DISTRICT



ENGLISH MEDIUM

LESSON – 1

TEST - 2

- 1 If $g = \{(1,1), (2,3), (3,5), (4,7)\}$ is a function given by $g(x) = \alpha x + \beta$ then the values of α and β are
(A) $(-1,2)$ (B) $(2,-1)$ (C) $(-1,-2)$ (D) $(1,2)$
- 2 If the ordered pairs $(a+2,4)$ and $(5,2a+b)$ are equal then (a,b) is
(A) $(2,-2)$ (B) $(5,1)$ (C) $(2,3)$ (D) $(3,-2)$
- 3 $f(x) = (x+1)^3 - (x-1)^3$ represents a function which is
(A) linear (B) cubic (C) reciprocal (D) quadratic
- 4 If $f(x) = 2x^2$ and $g(x) = \frac{1}{3x}$, then $f \circ g$ is
(A) $\frac{3}{2x^2}$ (B) $\frac{2}{3x^2}$ (C) $\frac{2}{9x^2}$ (D) $\frac{1}{6x^2}$
- 5 Let $n(A) = m$ and $n(B) = n$ then the total number of non-empty relations that can be defined from A to B is
(A) m^n (B) n^m (C) $2^{mn} - 1$ (D) 2^{mn}
- 6 The range of the relation $R = \{(x, x^2) \mid x \text{ is a prime number less than } 13\}$ is
(A) $\{2,3,5,7\}$ (B) $\{2,3,5,7,11\}$
(C) $\{4,9,25,49,121\}$ (D) $\{1,4,9,25,49,121\}$
- 7 If $f: A \rightarrow B$ is a bijective function and if $n(B) = 7$, then $n(A)$ is equal to
(A) 7 (B) 49 (C) 1 (D) 14

- 8 Let $f(x) = \sqrt{1+x^2}$ then
- (A) $f(xy) = f(x) \cdot f(y)$ (B) $f(xy) \geq f(x) \cdot f(y)$
(C) $f(xy) \leq f(x) \cdot f(y)$ (D) None of these
- 9 If $\{(a, 8), (6, b)\}$ represents an identity function, then the value of a and b are respectively
- (A) (8,6) (B) (8,8) (C) (6,8) (D) (6,6)
- 10 If $A = \{1, 2\}$, $B = \{1, 2, 3, 4\}$, $C = \{5, 6\}$ and $D = \{5, 6, 7, 8\}$ then state which of the following statement is true.
- (A) $(A \times C) \subset (B \times D)$ (B) $(B \times D) \subset (A \times C)$
(C) $(A \times B) \subset (A \times D)$ (D) $(D \times A) \subset (B \times A)$