ONE MARK TEST

P. ELANGOVAN, B.T. Assistant (Mathematics)

GOVERNMENT HIGHER SECONDARY SCHOOL

KOLIYANUR – VILLUPURAM DISTRICT

ENGLISH MEDIUM **LESSON – 1** **TEST - 3**

1 $A=\{a,b,p\},\ B=\{2,3\},\ C=\{p,q,r,s\}$ then $n[(A\cup C)\times B]$ is

(A) 8 (B) 20 (C) 12 (D) 16

2 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}

3 If there are 1024 relations from a set $A=\{1,2,3,4,5\}$ to a set B, then the number of elements in B is

(A) 3 (B) 2 (C) 4 (D) 8

4 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)

5 If $f: A\to B$ is a bijective function and if $n(B)=7$, then $n(A)$ is equal to

(A) 7 (B) 49 (C) 1 (D) 14

6 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)

7 If $f(x)=2x^2$ and $g(x)=\dfrac{1}{3x}$, then $f\circ g$ is

(A) $\dfrac{3}{2x^2}$ (B) $\dfrac{2}{3x^2}$ (C) $\dfrac{2}{9x^2}$ (D) $\dfrac{1}{6x^2}$

8 The range of the relation $R = \{(x, x^2) \mid x$ 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}

9 $f(x) = (x+1)^3 - (x-1)^3$ represents a function which is

(A) linear (B) cubic (C) reciprocal (D) quadratic

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) $(D \times A) \subset (B \times A)$