

10<sup>th</sup> Maths QR code one mark Questions  
Chapter-1 Relation and function

- If  $f : R \rightarrow R$  defined by  $f(x) = x^2 + 2$ , then the pre-image of 27 is  
 (A) 5, -5    (B)  $\sqrt{5}, -\sqrt{5}$     (C) 5, 0    (D) 0, 5
- If  $n(A) = p$ ,  $n(B) = q$  then the total number of relations that exist between A and B is  
 (A)  $2^p$     (B)  $2^q$     (C)  $2^{p+q}$     (D)  $2^{pq}$
- Given  $f(x) = (-1)^x$  is a function from  $N \rightarrow Z$ . Then the range of f is  
 (A) 1    (B) N    (C) {1, -1}    (D) Z
- $f(x) = \frac{1}{1+x}$ , f is defined for all real numbers except  
 (A)  $x=1$     (B)  $x=0$     (C)  $x=-1$     (D)  $x=2$
- If  $f(x) = \sqrt{x}$  then  $f(4)$   
 (A) 4    (B)  $\sqrt{2}$     (C) 2    (D) None of these
- If  $f(x) = x+1$ , then  $f(f(f(y+2)))$  is  
 (A)  $y+3$     (B)  $y+5$     (C)  $y+7$     (D)  $y+9$
- If  $A = \{a, b, c\}$   $B = \{2, 3\}$  and  $C = \{a, b, c, d\}$  then  $n(A \times C) \times B$  is  
 (A) 4    (B) 8    (C) 6    (D) 12
- If f is a identity function, then the value of  $f(1) - 2f(2) + f(3)$  is  
 (A) 1    (B) 0    (C) -1    (D) -3
- If f is constant function of value  $\frac{1}{10}$ . then the

Value of  $f(1) + f(2) + \dots + f(100)$  is

- (A)  $\frac{1}{10}$     (B) 10    (C) 100    (D)  $\frac{1}{100}$

10. If a function  $f : A \rightarrow B$  is both one-one and onto then f is called (A) Injection (B) Surjection (C) Bijection (D) None

11. If  $f(x) = x^m$  and  $g(x) = x^n$  then  $fog =$

- (A)  $x^{m+n}$     (B)  $x^{m-n}$     (C)  $x^{mn}$     (D) 1

12. If  $f(1) = -1$  then pre-image of -1 is

- (A) 1    (B) -1    (C) 0    (D) 2

13. Real numbers R is defined as follows

- (A)  $N \cup W$     (B)  $Q \cup Q'$     (C)  $W \cup Z$     (D)  $Z \cup Q$

14.  $f(x) = \frac{1}{x^2 - 5x + b}$  the domain of f is

- (A)  $R - \{2, 3\}$     (B) R    (C) N    (D) Z

15.  $A = \{1, 2, 3, 4\}$  and  $B = \{a, b, c\}$  which of the following are relations from B to A?

- (A)  $\{(c, a), (c, b), (c, d)\}$     (B)  $\{(a, 1), (b, 3), (c, 2)\}$

- (C)  $\{(1, a), (b, 4), (c, 3)\}$     (D)  $\{(1, b), (1, c), (3, a), (4, b)\}$

1. (A)	2. (D)	3. (C)	4. (C)	5. (C)	6. (B)	7. (C)	8. (B)
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9. (B)	10. (C)	11. (C)	12. (A)	13. (B)	14. (A)	15. (B)
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