



A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-5

SUBJECT - MATHEMATICS

<u>Term : 1st</u>

Topic – Mappimg or function

Class: XII

Full Marks: 15

Date:16.05.2020

Select the correct alternative of	f the following questions.
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Q1.	Let <i>f</i> (;	Let R be the set of real numbers and the mapping $R \rightarrow R$ be dined as $f(x) - 2x^{2}$, then $f^{-1}(32) =$					
	a.	{4, -4}	b. {1, -1}	c.{2, -2}	d. none of these		
Q2.	The mapping $f: A \rightarrow B$ invertible if f is						
	a.	Injective	b. surjective	c. bijective	d. none of these		
Q3.	Let A = {a, b, c, d} and $f: A \rightarrow A$ be defined as f(a) = d, f(b)= a, f(c) = b and f(d)=c. State whic the following is equal to f^{-1} (b).						
	a.	{a}	b. {b}	c. {c}	d. none of these		
Q4.	Let Z be the set of integers and the mapping $f: Z \to Z$ be defined by, $f(x) = x^2$. State w the following is equal to $f^{-1}(-4)$?						
	a.	{2}	b. {-2}	c.{2, -2}	d. none of these		
Q5.	Let the function $f: A \to B$ have an inverse function $f^{-1}: B \to A$, then the nature pf function is						
	a.	One to one &onto	b. One to one &into	c. Many to one &onto	d. none of these		
Q6.	Let A= { -2, -1, 0, 1, 2 } and $f: A \rightarrow A$ be dined by f(-2)=1, f(-1) =-2, f(0) =1, f(2) = 1. Find $f^{-1}(-1)$						
	a.	Φ	b. {1}	c. {-1}	d. none of these		

Q7.	The function $f: R \to R$ be defined as $f(x) = x^2$, then $f^{-1}(25)$ is						
	a. {-5, 5}	b.{-3, 3}	c. [-2, 2}	d. none of these			
Q8.	Let $A=\{a, b, c\}$ and $B = \{p, q, r\}$, then one of their inverse mapping is						
	a. {(q,a),(p, b), (r, c)}	b. {(a,p),(b,q), (c,r)}	c. {a, p, c}	d. none of these			
Q9.	Let C be the set of all complex numbers and $f: A \rightarrow A$ be given by $f(x) = 3x^2 + 16$. Then						
	$f^{-1}(-1)$ is						
	a. $(\sqrt{5}, -\sqrt{5})$	b. $\{\sqrt{5}i, -\sqrt{5}i\}$	c. $(\sqrt{3}, -\sqrt{3})$	d. none of these			
Q10.	Let the function $f: R \to R$, be given by $(x) = 3x^2 - 14x + 10$, then $f^{-1}(2)$ is						
	a. {3, 4}	b. $\{\frac{2}{3}, 4\}$	c. {4, -3}	d. none of these			
Q11.	Let fx) = $2x - \sin x$ and g(x)= $x^{\frac{1}{3}}$, then						
	a. gofisR	b. g o f is many to one	c. g o f is one to many	d. none of these			
Q13.	If $e^{f(x)} + e^x = e$, then for f(x) domain is						
	a. (-∞,∞)	b. (-∞ ,0)	c. (-∞ , 1)	d. none of these			
Q14.	If the function f satisfies the relation $f(x+y) + f(x-y) = 2f(x)f(y)$, $\forall x, y \in R$ and $f(0) \neq 0$ then $f(x+y) = 2f(x)f(y)$.						
	a. Even function	b. odd function	c. constant	d. none of these			
Q15.	If $R^+ \rightarrow R^+$ is a polynomial function satisfying the functional equation f{f(x)}= 6x - f(x), then f(17) is equal to						
	a. 17	b51	c. +347	d. none of these			