TEST - PAPER (CBSE/NCERT)

RELATIONS AND FUNCTIONS

SESSION -2024-25

CLASS - 12th

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6th to 10th (Math's & Science), 11th & 12th (Physics, Chemistry, Math's)

Time: 1hr

Relations and Functions

mm:

Q 1. If
$$A = \{a,b,c,d\}$$
 and the function $f = \{(a,b),(b,d),(C,q),(d,c)\}$ write in f^{-1}

B. 2. If $f: R \to R$ is defined by $f(x) = x^2 - 3x + 2$.

Unite $f: f(x) = x^2 - 3x + 2$.

(3.3. Is $g = \frac{1}{2}(1.1)$, (2.3), (3.5) (4.7) $\frac{1}{2}$ a function? If g is described by g(x) = xx + B, then
What value. Should be assigned to x and x

B.4. If the mappings of and g are given by $f = \{(1,2), (3,5), (4,1)\} \text{ and } g = \{(2,3), (5,1), (1,3)\}$ Write fog.

O.S. Let c be the set of Complex numbers, prove that mapping f: c > R given by f(z) = 121, Y z Ec, is neither one-one hor onto.

6th to 10th (Math's & Science), 11th & 12th (Physics, Chemistry, Math's)

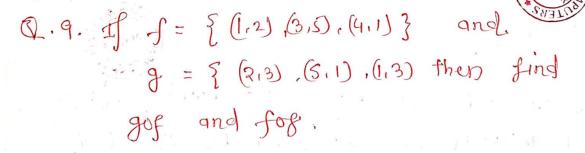
B. G. Let the function of: R > R be defined by f(x) = COSX Y XER. Show that I is neither one-one nor onto.

O. 7. Let
$$A = R - \{3\}$$
, $B = R - \{1\}$. If $f: A \rightarrow B$ be defined by $f(\alpha) = \frac{\alpha - 2}{\alpha - 3}$, $\forall \alpha \in A$ then show that f is bijective.

Q.8. Let A = [-1,1], then discuss Whether The following functions defined on A are one-one, onto or bijective

(i)
$$f(x) = \frac{2}{3}$$
 (ii) $f(x) = |x|$

(ii)
$$g(x) = |x|$$



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