DELHI PUBLIC SCHOOL, JAMMU
Assignment

Class: XI
Sub: Applied Maths

Month:July

TOPIC :Function and relation.

Based on your understanding of e-lectures-cum-PPTs, video links and other-e-resources share withyou,answer the following question.

Choose the correct answer from the given MCQ:

Q1. **Let R be a relation on the set N given by R = {(a, b) : a = b – 2, b > 6}. Then,**

a. (2, 4) ∈ R **b. (3, 8) ∈ R** **c. (6, 8) ∈ R** **d. (8, 7) ∈ R**

Q2. **Which of the following is not an equivalence relation on Z?**

a. a R b ⇔ a + b is an even integer **b. a R b ⇔ a – b is an even integer**

c. a R b ⇔ a < b **d. a R b ⇔ a = b**

Q3. **R is a relation on the set Z of integers and it is given by (x, y) ∈R ⇔ $|x - y| \leq 1$. Then, R is**

a. reflexive and transitive **b. reflexive and symmetric**

c. symmetric and transitive **d. an equivalence relation**

Q4. **The relation R defined on the set A = {1, 2, 3, 4, 5} by R = $\{(a, b): |a^2 - b^2| < 16\}$, given by**

a. {(1, 1), (2, 1), (3, 1), (4, 1), (2, 3)} **b. {(2, 2), (3, 2), (4, 2), (2, 4)}**

c. {(3, 3), (4, 3), (5, 4), (3, 4)} **d. none of these**

Q5. **Let R be the relation over the set of all straight lines in a plane such that $l_1 R l_2 \Leftrightarrow l_1 \perp l_2$. Then, R is**

a. Symmetric **b. reflexive** **c. transitive** **d. an equivalence relation**

Q6. **If A = {a, b, c},then the relation R = {(b, c)} on A is**

a. reflexive only **b. symmetric only**

c. transitive **d. reflexive and transitive only**

Q7. **Let A = {2, 3, 4, 5, ….17, 18}. Let $'\simeq'$ be the equivalence relation on A× A, Cartesian product of A with itself defined by (a, b) ≃ (c, d) iff ad = bc. Then, the number of ordered pairs of the equivalence class of (3, 2) is**

a. 4 **b. 5** **c. 6** **d. 7**

Q8. **Let A = {1, 2, 3}. Then, the number of relations containing (1, 2) and (1, 3) which are reflexive and symmetric but not transitive is**

a. 1 **b. 2** **c. 3** **d. 4**

Q9. **The relation $'R'$ in N × N such that (a, b) R (c, d) ⟺ a + d = b + c is**

a. reflexive but not symmetric **b. reflexive and transitive but not symmetric**

c. an equivalence relation **d. none of these**

Q10. **If A = {1, 2, 3}, B = {1, 4, 6, 9} and R is a relation from A to B defined by 'x is greater than y'. Then range of R is**

a. {1, 4, 6, 9} **b. {4, 6, 9}** **c. {1}** **d. none of these**

Due date of submission of assignment 20 July,2021

send your assignment on e-mail ID of your respective subject teacher

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Students must mention their name,class/section and date in their assignment.

your assignment will be marked for internal/term assessment. Therefore you are required to submit it on time.

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