MATHEMATICS

DPP

DAILY PRACTICE PROBLEMS

DPP No. 81

Total Marks : 21

Max. Time : 21 min.

Topic : Mathematical Reasoning

Type of Questions **M.M., Min.**

Single choice Objective (no negative marking) Q.1,2,3,4,5,6,7 (3 marks, 3 min.) [21, 21]

1. $(p \vee q) \wedge \sim p$ is logically equivalent to

(A) $p \wedge q$ (B) $\sim p \wedge q$

(C) $\sim p \wedge \sim q$ (D) $\sim (p \wedge q)$

2. If Mumbai is in England then $2 + 2 = 5$ is

(A) a true statement (B) a false statement

(C) not a statement (D) may be true or false

3. Negation of " If it is raining then game is cancelled" is

(A) It is raining and game is not cancelled

(B) It is not raining and game is cancelled

(C) It is not raining and game is not cancelled

(D) If it is raining then game is not cancelled

4. Converse of the statement : If a number n is even, then n^2 is even, is

(A) If a number n^2 is even, then n is even

(B) If a number n is not even, then n^2 is not even

(C) Neither number n nor n^2 is even

(D) None of these

5. Contrapositive of p : "If x and y are intergers such that xy is odd, then both x and y are odd" is

(A) If both integers x and y are odd, then xy is odd

(B) If both integers x and y are even, then xy is even

(C) If integer x or integer y is odd, then xy is odd

(D) If both x and y are not odd, then the product xy is not odd

6. Let p, q be the statements : p : X is a square, q : X is a rectangle, then which one of the following represents converse of $p \rightarrow q$.

(A) If X is a rectangle then X is a square

(B) If X is a rectangle then X is not a square

(C) X is rectangle but X is not a square

(D) none of these

7. Let p, q, r be three statements, then $(p \rightarrow (q \rightarrow r)) \leftrightarrow ((p \wedge q) \rightarrow r)$, is a

(A) tautology (B) contradiction (C) fallacy (D) None of these

Answers Key

1. (B)

2. (A)

3. (A)

4. (A)

5. (D)

6. (A)

7. (A)