MATHEMATICS

DPP

DAILY PRACTICE PROBLEMS

DPP No. 2

Total Marks : 24

Max. Time : 30 min.

Topic : Fundamentals of Mathematics

Type of Questions		**M.M., Min.**
Single choice Objective ('–1' negative marking) Q.1,3,4,5,6	**(3 marks, 3 min.)**	**[15, 15]**
Fill in the Blanks (no negative marking) Q.2	**(4 marks, 4 min.)**	**[4, 4]**

1. A set of 'n' numbers has the sum 's'. Each number of the set is increased by 20, then multiplied by 5 and then decreased by 20. The sum of the numbers in the new set thus obtained is :

(A) s + 20 n (B) 5s + 80n

(C) s (D) 5s + 4n

2. The number $3.1\overline{45}$ when expressed as a rational number in lowest form, is equal to _____.

3. Consider the following statements

(i) The sum of a rational number with an irrational number is always irrational.

(ii) The product of two rational numbers is always rational.

(iii) The product of two irrationals is always irrationals.

(iv) The sum of two rational is always rational.

(v) The sum of two irrationals is always irrational.

The correct order of True/False of above statements is :

(A) T F T F F (B) F F T T T (C) T T F T F (D) T T F F T

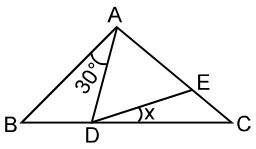
4. The expression $\left[\sqrt[3]{\sqrt[6]{a^9}}\right]^4 \left[\sqrt[6]{\sqrt[3]{a^9}}\right]^4$ is simplified to

(A) a^{16} (B) a^{12} (C) a^8 (D) a^4

5. In the figure, if AB = AC, $\angle$ BAD = 30° and AE = AD, then x is equal to

(A) 15° (B) 10°

(C) 12½° (D) 7½°



6. If $\frac{3+2\sqrt{2}}{3-\sqrt{2}} = a + b\sqrt{2}$, then a & b (a, b $\in$ Q) are respectively equal to

(A) $\frac{13}{7}, \frac{9}{7}$ (B) $\frac{9}{7}, \frac{13}{7}$ (C) $\frac{13}{7}, \frac{7}{9}$ (D) $\frac{7}{9}, \frac{7}{13}$

Answers Key

1. (B) **2.** 173/55 **3.** (C) **4.** (D)

5. (A) **6.** (A)