

**CHOITHRAM SCHOOL**

**Class : XI Subject : Mathematics**

**Assignment no. 1**

**Date of Assignment: 29.06.18**

**Date of Submission: 03.07.18**

Q No.	Question	Weightage	Level
Q1	If $\mathbf{R}$ is the set of real numbers and $\mathbf{Q}$ is the set of rational numbers, then what is $\mathbf{R} - \mathbf{Q}$ ?	1 mark	Knowledge
Q2	Write the set $\left\{\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6}, \frac{6}{7}\right\}$ in the set-builder form.	1 mark	Understanding
Q3	If $X = \{a, b, c, d\}$ , $Y = \{f, b, d, g\}$ . Find $X - Y$ and $Y - X$ .	1 mark	H.O.T.
Q4	If $A$ and $B$ are two given sets, Then represent the set $(B - A)'$ , Using Venn diagram.	2 marks	Knowledge
Q5	If 63% of persons like oranges where 76% like apples, what can be said about the % of persons who like both oranges and apples?	2 marks	Understanding
Q6	There are 200 individuals with a skin disorder, 120 had been exposed to the chemical $C_1$ , 50 to chemical $C_2$ , and 30 to both the chemicals $C_1$ and $C_2$ . Find the number of individuals exposed to (i) Chemical $C_1$ but not chemical $C_2$ (ii) Chemical $C_2$ but not chemical $C_1$ .	2 marks	Logical Reasoning
Q7	$A = \{1, 2, 3, 4\}$ . Write the power set of $A$ and number of elements in the power set.	2 marks	H.O.T.
Q8	If $A = \{x : x \text{ is a natural number}\}$ , $B = \{x : x \text{ is an even natural number}\}$ , $C = \{x : x \text{ is an odd natural number}\}$ and $D = \{x : x \text{ is a prime number}\}$ , Find (i) $A \cap B$ (ii) $A \cap C$ (iii) $A \cap D$ (iv) $B \cap C$ (v) $B \cap D$ (vi) $C \cap D$	3 marks	Understanding
Q9	In a survey of 100 students, the no. of students studying the various languages were found to be English only 18, English but not Hindi 23, English and Sanskrit 8, English 26, Sanskrit 48, Sanskrit and Hindi 8, no language 24. Find (i) How many students were studying Hindi? (ii) How many students were studying English and Hindi?	3 marks	Understanding
Q10	Let $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ , $A = \{1, 2, 3, 4, 7\}$ , $B = \{2, 4, 6, 8, 10\}$ . Find (i) $(A \cup B)^c$ (ii) $(A \cap B)^c$ (iii) $(A^c \cup B^c)$ (iv) $(A^c \cap B^c)$ .	3 marks	Multi Conceptual
Q11	Given $n(U) = 20$ , $n(A) = 12$ , $n(B) = 9$ , $n(A \cap B) = 4$ , where $U$ is the universal set, $A$ and $B$ are subsets of $U$ , then find $n((A \cup B)^c)$ .	5 marks	H.O.T.
Q12	In a town of 10,000 families, it was found that 40% families buy newspaper $A$ , 20% families buy newspaper $B$ and 10% families buy newspaper $C$ . 5% families buy $A$ and $B$ , 3% buy $B$ and $C$ and 4% buy $A$ and $C$ . If 2% families buy all the three papers. Find the no. of families which buy (i) $A$ only (ii) $B$ only (iii) none of $A$ , $B$ , and $C$ .	5 marks	Logical Reasoning