SETS

PRACTICAL PROBLEMS ON UNION & INTERSECTION

EXERCISE

Q.1 Which of the following is correct? (a) $n (A \cup B) = n (A) + n (B) + n (A \cap B)$ (b) $n (A \cup B) = n (A) - n (B) - n (A \cap B)$ (c) $n (A \cup B) = n (A) + n (B) - n (A \cap B)$ (d) $n (A \cap B) = n (A) + n (B) + n (A \cup B)$ Q.2 What is $A \cup B$ for two mutually exclusive sets A and B? (a) n(A) + n(B)(b) n (A) – n (B) (c) n (B) – n (A) (d) n (A) * n (B) Q.3 If set A has 10 elements, set B has 20 elements, 5 elements are common to both then find the number of elements in $X \cup Y$. (a) 10 (b) 15 (c) 20 (d) 25 In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of Q.4 them like coffee. How many of them like both tea and coffee? (a) 1 (b) 2 (c) 7 (d) 9 Q.5 In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of them like coffee. How many of them like neither tea nor coffee?

(a) 1 (b) 2

(c) 3 (d) 4

CLASS 11

In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of			
them like coffee. How many of them like only tea?			
(a) 2	(b) 3		
(c) 4	(d) 5		
In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of them like coffee. How many of them like only coffee?			
(a) 2	(b) 3		
(c) 4	(d) 5		
In a city of 1000 population, all people rea Times and 700 people read Times of India (a) 100 (c) 1000	d newspaper. 600 people read Hindustan . How many people read both newspaper? (b) 300 (d) 1300		
In a city of 1000 population, all people rea Times and 700 people read Times of India Times? (a) 100 (c) 300	d newspaper. 600 people read Hindustan . How many people read only Hindustan (b) 200 (d) 600		
In a city of 1000 population, all people rea Times and 700 people read Times of India India? (a) 200 (c) 600	d newspaper. 600 people read Hindustan . How many people read only Times of (b) 400 (d) 700		
In a committee, if 50 people speak French, speak both the languages, then how many languages? (a) 10 (c) 50	20 people speak Spanish, 10 people people speak at least one of the two (b) 20 (d) 60		
	In a family of 10 members, 7 of them like of them like coffee. How many of them like of (a) 2 (c) 4 In a family of 10 members, 7 of them like to them like coffee. How many of them like of (a) 2 (c) 4 In a city of 1000 population, all people rea Times and 700 people read Times of India (a) 100 (c) 1000 In a city of 1000 population, all people rea Times and 700 people read Times of India Times? (a) 100 (c) 300 In a city of 1000 population, all people rea Times and 700 people read Times of India India? (a) 200 (c) 600 In a committee, if 50 people speak French, speak both the languages, then how many languages? (a) 10 (c) 50		

CLASS 11

Q.12 A group conducted a survey of 100 consumers and reported that 72 consumers like apples and 45 consumers like oranges, what is the least number that must have liked both products?

(a) 14	(b) 15
(c) 16	(d) 17

Q.13 In a population of 1000 people, 700 people play football, 600 people play cricket, and 100 people play both. Is the data correct?

(a) True

(b) False

Q.14 In a group of students, 100 students know Hindi, 50 know English and 25 know both. Each of the student knows either Hindi or English. How many students are there in the group?

(a) 75	(b) 100
(c) 125	(d) 17

- **Q.15** If 200 people like tea, 300 people like coffee and 250 people like both. Is the data correct?
 - (a) True
 - (b) False

ANSWER KEY

- **1.** (c)
- **2.** (a)
- **3.** (d)
- **4.** (b)
- 5. (c)
- **6.** (a)
- **7.** (b)

CLASS	S 11	MATHS
8.	(b)	
9.	(c)	
10.	(b)	
11.	(d)	
12.	(d)	
13.	(b)	
14.	(c)	
15.	(b)	