NAME :

CLASS & SEC. :

# STD – 9 – MATHS – ONE MARK

1

## SET LANGUAGE

*A set is a many that allows itself to thought of as a one*
*-Georg Cantor*

### Multiple Choice Questions

1. Which of the following is correct?
   (1) $\{7\} \in \{1,2,3,4,5,6,7,8,9,10\}$ (2) $7 \in \{1,2,3,4,5,6,7,8,9,10\}$
   (3) $7 \notin \{1,2,3,4,5,6,7,8,9,10\}$ (4) $\{7\} \not\subseteq \{1,2,3,4,5,6,7,8,9,10\}$

2. The set $P = \{x \mid x \in \mathbb{Z}, -1 < x < 1\}$ is a
   (1) Singleton set (2) Power set (3) Null set (4) Subset

3. If $U = \{x \mid x \in \mathbb{N}, x < 10\}$ and $A = \{x \mid x \in \mathbb{N}, 2 \le x < 6\}$ then $(A')'$ is
   (1) {1, 6, 7, 8, 9} (2) {1, 2, 3, 4} (3) {2, 3, 4, 5} (4) { }

4. If $B \subseteq A$ then $n(A \cap B)$ is
   (1) $n(A-B)$ (2) $n(B)$ (3) $n(B-A)$ (4) $n(A)$

5. If $A = \{x, y, z\}$ then the number of non- empty subsets of $A$ is
   (1) 8 (2) 5 (3) 6 (4) 7

6. Which of the following is correct?
   (1) $\varnothing \subseteq \{a, b\}$ (2) $\varnothing \in \{a, b\}$ (3) $\{a\} \in \{a, b\}$ (4) $a \subseteq \{a, b\}$

7. If $A \cup B = A \cap B$, then
   (1) $A \neq B$ (2) $A = B$ (3) $A \subset B$ (4) $B \subset A$

8. If $B - A$ is $B$, then $A \cap B$ is
   (1) $A$ (2) $B$ (3) U (4) $\varnothing$

9. From the adjacent diagram $n[P(A \Delta B)]$ is
   (1) 8 (2) 16
   (3) 32 (4) 64

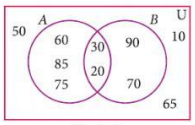


Fig. 1.40

10. If $n(A) = 10$ and $n(B) = 15$, then the minimum and maximum number of elements in $A \cap B$ is
    (1) 10,15 (2) 15,10 (3) 10,0 (4) 0,10

11. Let $A = \{\varnothing\}$ and $B = P(A)$, then $A \cap B$ is
    (1) $\{\varnothing, \{\varnothing\}\}$ (2) $\{\varnothing\}$ (3) $\varnothing$ (4) $\{0\}$

12. In a class of 50 boys, 35 boys play Carrom and 20 boys play Chess then the number of boys play both games is
    (1) 5 (2) 30 (3) 15 (4) 10.

13. If $U = \{x : x \in \mathbb{N} \text{ and } x < 10\}$, $A = \{1,2,3,5,8\}$ and $B = \{2,5,6,7,9\}$, then $n[(A \cup B)']$ is
    (1) 1 (2) 2 (3) 4 (4) 8

14. For any three sets P, Q and R, $P - (Q \cap R)$ is
    (1) $P - (Q \cup R)$ (2) $(P \cap Q) - R$
    (3) $(P - Q) \cup (P - R)$ (4) $(P - Q) \cap (P - R)$

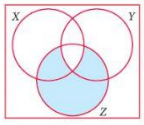
15. Which of the following is true?
    (1) $A - B = A \cap B$ (2) $A - B = B - A$
    (3) $(A \cup B)' = A' \cup B'$ (4) $(A \cap B)' = A' \cup B'$

16. If $n(A \cup B \cup C) = 100$, $n(A) = 4x$, $n(B) = 6x$, $n(C) = 5x$, $n(A \cap B) = 20$, $n(B \cap C) = 15$, $n(A \cap C) = 25$ and $n(A \cap B \cap C) = 10$, then the value of $x$ is
    (1) 10 (2) 15 (3) 25 (4) 30

17. For any three sets A, B and C, $(A - B) \cap (B - C)$ is equal to
    (1) A only (2) B only (3) C only (4) $\phi$

18. If $J$ = Set of three sided shapes, $K$ = Set of shapes with two equal sides and $L$ = Set of shapes with right angle, then $J \cap K \cap L$ is
    (1) Set of isoceles triangles (2) Set of equilateral triangles
    (3) Set of isoceles right triangles (4) Set of right angled triangles

19. The shaded region in the Venn diagram is
    (1) $Z - (X \cup Y)$ (2) $(X \cup Y) \cap Z$
    (3) $Z - (X \cap Y)$ (4) $Z \cup (X \cap Y)$




20. In a city, 40% people like only one fruit, 35% people like only two fruits, 20% people like all the three fruits. How many percentage of people do not like any one of the above three fruits?
    (1) 5 (2) 8 (3) 10 (4) 15

P.LAKSHMANAN,
BT ASSISTANT,
GHSS., PAPPAPATTI,
MUSIRI TK, TRICHY DT.
9843954265.



LIVEWORKSHEETS