



# SUCCESS KEY TEST SERIES

IX (English)

(Unit Test -1 Math-1 (ch 1 & 2))

Mathematics Part - 1-(Chapter 1 & 2)

DATE: 25-09-19

TIME: 2 hrs

MARKS: 40

SEAT NO: 

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**Q.1 Choose the correct alternative.**

**(5)**

- 1) Find the correct option for the given question.  
If  $T = \{1, 2, 3, 4, 5\}$  and  $M = \{3, 4, 7, 8\}$  then  $T \cup M = ?$   
A)  $\{1, 2, 3, 4, 5, 7\}$       B)  $\{1, 2, 3, 7, 8\}$   
C)  $\{1, 2, 3, 4, 5, 7, 8\}$       D)  $\{3, 4\}$
- 2) The value of  $|12 - (13 + 7) \times 4|$  is.....  
A) -68      B) 68      C) -32      D) 32
- 3) Find the correct option for the given question.  
Which of the following collections is a set?  
A) Colours of the rainbow      B) Tall trees in the school campus.  
C) Rich people in the village      C) Easy examples in the book.
- 4) if  $M = \{1, 3, 5\}$ ,  $N = \{2, 4, 6\}$ , then  $M \cap N = ?$   
A)  $\{1, 2, 3, 4, 5, 6\}$       B)  $\{1, 3, 5\}$       C)  $\phi$       D)  $\{2, 4, 6\}$
- 5) If  $P \subseteq M$ , then Which of the following set represent  $P \cap (P \cup M)$ ?  
A) P      B) M      C)  $P \cup M$       D)  $P' \cap M$

**B) Solve the following questions. (Any three)**

**(6)**

- 1) If  $A = \{a, b, c, d, e\}$ ,  $B = \{c, d, e, f\}$ ,  $C = \{b, d\}$ ,  $D = \{a, e\}$  then which of the following statements true and which is false?  
 $A \subseteq D$
- 2) State which of the following are surds. Justify :  $\sqrt[3]{64} = 4$
- 3) State the order of the surds given below.  
 $\sqrt[3]{7}$
- 4) Compare the following pair of surds :  $2\sqrt{7}$ ,  $\sqrt{28}$

**Q.2 A) Complete the following Activities. (Any three)**

**(6)**

- 1) Write the following numbers in its decimal form..  
 $\frac{121}{13}$   
 $\frac{121}{13} = \underline{\hspace{2cm}}$
- 2) If  $n(A) = 7$ ,  $n(B) = 13$ ,  $n(A \cap B) = 4$ , then  $n\{A \cup B\} = ?$   
 $n(A \cup B) = n(A) + n(B) - \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

3)  $A = \{x \mid x = 2n, n \in \mathbb{N}, 0 < x \leq 10\}$ ,  $B = \{y \mid y \text{ is an even number}, 1 \leq y \leq 10\}$ , Are A and B equal sets?

$$A = \{\underline{\hspace{2cm}}\}$$

$$B = \{\underline{\hspace{2cm}}\}$$

$\therefore$  A and B are equal sets.

4) Simplify :  $7\sqrt{3} + 29\sqrt{3}$

$$= 7\sqrt{3} + 29\sqrt{3}$$

$$= \underline{\hspace{2cm}}\sqrt{3}$$

$$= \underline{\hspace{2cm}}\sqrt{3}$$

**B) Solve the following questions. (Any two)**

**(4)**

1) Which of the following are empty sets? why?

$A = \{a \mid a \text{ is a natural number smaller than zero.}\}$

2) Simplify :  $13\sqrt{8} + \frac{1}{2}\sqrt{8} - 5\sqrt{8}$

3) Solve :  $|\frac{8-x}{2}| = 5$

**Q.3 Solve the following questions. (Any four)**

**(12)**

3) Write the following numbers in  $\frac{p}{q}$  form :  $30.\overline{219}$

1) Prove that  $3 + \sqrt{5}$  is an irrational number.

2)  $A = \{1, 2, 3, 4, 5\}$        $B = \{2, 3\}$

$$A \cup B = \{1, 2, 3, 4, 5\}$$

Prove that,  $A \cup B = A$  Using Venn diagram

4) Solve

$$|7 - 2x| = 5$$

5) Express the recurring decimal  $0.777\dots$  is  $\frac{p}{q}$  form.

**Q.4 Solve the following questions. (Any one)**

**(4)**

1) Rationalize the denominator :  $\frac{\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}}$

2) Find the square root of 3 using division method.

**Q.5 Solve the following questions. (Any one)**

**(3)**

1) Express the recurring decimal  $7.529529529\dots$  is  $\frac{p}{q}$  form.

2) Show that  $4\sqrt{2}$  is an irrational number.