

Questions

Q1.

$$S = \{s, q, u, a, r, e\}$$

$$V = \{a, e, i, o, u\}$$

List the members of the set

(i) $S \cap V$

.....

(ii) $S \cup V$

.....

(Total for question = 2 marks)

Q2.

$$\mathcal{E} = \{2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$$

$$A = \{\text{odd numbers}\}$$

$$P = \{\text{prime numbers}\}$$

(a) List the members of the set

(i) $A \cap P$,

.....

(ii) $A \cup P$.

.....

(2)

$$8 \notin A?$$

(b) (i) Is it true that
Tick (✓) the appropriate box.

Yes No

(ii) Explain your answer.

(1)

(Total for question = 3 marks)

Q3.

$$\mathcal{E} = \{\text{even numbers}\}$$

$$A = \{\text{factors of 8}\}$$

$$B = \{\text{factors of 20}\}$$

List the members of $A \cap B$

(Total for Question is 2 marks)

Q4.

$$\mathcal{E} = \{\text{positive whole numbers less than 13}\}$$

$$A = \{\text{even numbers}\}$$

$$B = \{\text{multiples of 3}\}$$

$$C = \{\text{prime numbers}\}$$

(a) List the members of the set

(i) $A \cap B$

(ii) $B \cup C$

.....

(2)

(b) Is it true that $14 \in A$?

Tick (✓) the appropriate box.

Yes

No

Explain your answer.

.....

(1)

(Total for Question is 3 marks)

Q5.

(a) $A = \{p, r, a, g, u, e\}$

$B = \{p, a, r, i, s\}$

$C = \{b, u, d, a, p, e, s, t\}$

List the members of the set

(i) $A \cap B$

.....

(ii) $B \cup C$

.....

(2)

(b) $D = \{r, o, m, e\}$

$E = \{l, i, s, b, o, n\}$

$F = \{b, e, r, l, i, n\}$

Put one of the letters D , E or F in the box below to make the statement correct.

$$A \cap \square = \emptyset$$

Explain your answer.

.....

(1)

(Total for Question is 3 marks)

Q6.

$\mathcal{E} = \{\text{positive whole numbers less than } 19\}$

$A = \{\text{odd numbers}\}$

$B = \{\text{multiples of } 5\}$

$C = \{\text{multiples of } 4\}$

(a) List the members of the set

(i) $A \cap B$

.....

(ii) $B \cup C$

.....

(2)

$D = \{\text{prime numbers}\}$

(b) Is it true that $B \cap D = \emptyset$?

Tick (✓) the appropriate box.

Yes

No

Explain your answer.

.....

(1)

(Total for question = 3 marks)

Q7.

$$\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

$$A = \{\text{even numbers}\}$$

$$B = \{\text{multiples of 3}\}$$

(a) List the members of set B .

.....
(1)

(b) Find $A \cup B$.

.....
(1)

(c) Find $A \cap B$.

.....
(1)

x is a member of \mathcal{E} .

$$x \in B$$

$$x \notin A$$

(d) What are the possible values of x ?

.....
(2)

(Total for question = 5 marks)

Q8.

$$S = \{c, h, i, n, a\}$$

$$V = \{i, t, a, l, y\}$$

List the elements of the set

(i) $S \cap V$

.....

(ii) $S \cup V$

.....

(Total for question = 2 marks)