

## B 19- Inequality



### Question 1.

In the question below are given three statements followed by three conclusions I, II and III. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

#### Statements:

No Red is Grey.

Some Green are Red

Some White are Green.

#### Conclusions:

I. Some Grey are White.

II. All Grey being Green is a possibility.

III. At least some White are Red being.

1) Only II follows.

2) Only III follows.

3) Both II and III follow.

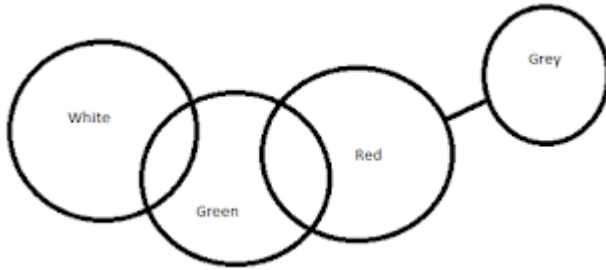
4) Either II or III follows

5) None of these

**Ans: 1 (1)**

#### Solution:

The least possible Venn diagram for the given statements is as follows,

**Conclusions:**

- I) Some Grey are White → False  
 II) All Grey being Green is a possibility → True.  
 III) At least some White are Red being → False.  
 Hence conclusion II follows.

**Question 2.**

**Directions:** In the question below are given three statements followed by three conclusions I, II and III. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts. **Statements:**

**Some Novels are Page.**

**All Copies are Book.**

**Some Books are Novel.**

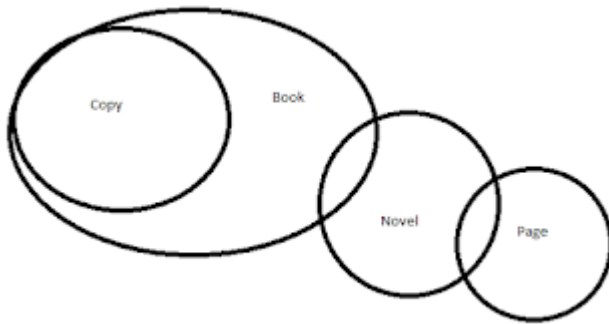
**Conclusions:**

- I. Some Copies are Novel.  
 II. Some Books are Copy.  
 III. No Copy is Page.  
 1) Only II follows.  
 2) Only III follows.  
 3) Both II and III follow.  
 4) Either II or III follows  
 5) None follows.

**Ans:** 2 (1)

**Solution:**

The least possible Venn diagram for the given statements is as follows,

**Conclusions:**

- I) Some Copies are Novel → False.  
 II) Some Books are Copy → True.  
 III) No Copy is Page. → False.  
 Hence, conclusion II follows.

**Question 3.**

**Directions:** In the question below are given three statements followed by three conclusions I, II and III. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts. **Statements:**

**All Digital are Watches.**

**Some Watches are Calendar.**

**No Clock is a Watch.**

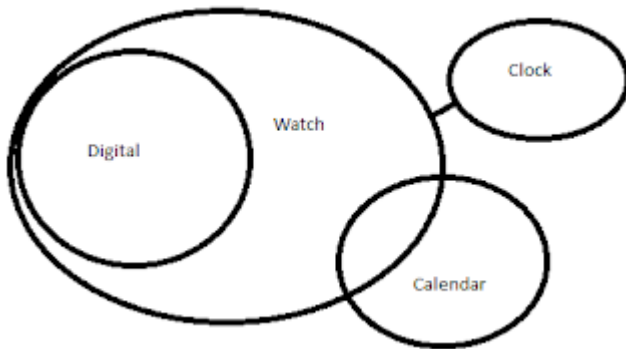
**Conclusions:**

- I. All Watches being Calendar is a possibility.  
 II. No Calendar is a Clock.  
 III. Some Digitals may be Calendar.  
 1) Only II follows.  
 2) Only III follows.  
 3) Both I and III follow.  
 4) Either II or III follows  
 5) None of these

Ans: 3 (3)

**Solution:**

The least possible Venn diagram for the given statements is as follows,

**Conclusions:**

- I) All Watches being Calendar is a possibility → True.  
 II) No Calendar is a Clock → False.  
 III) Some Digitals may be Calendar → True.  
 Hence conclusion I and III follow.

**Question 4.**

**Directions:** In the following question assuming the given statements to be true, find which of the conclusion among given conclusions is /are definitely true and then give your answers accordingly.

**Statements:**

$$W \geq P \leq C; S < Q = P; O = F \leq Q < Z$$

**Conclusions:**

- I.  $W > F$   
 II.  $C < Z$   
 III.  $Q = C$   
 IV.  $S < C$   
 1) None is true  
 2) Only I is true  
 3) Only I and III are true  
 4) Only II and IV are true  
 5) Only IV is true

Ans: 4 (5)

**Solution:**

**Given statements:**  $W \geq P \leq C; S < Q = P; O = F \leq Q < Z$

**On combining:**  $S < Q = P \leq W; O = F \leq Q < Z; P \leq C$

**Conclusions:**

- I.  $W > F \rightarrow$  False (as  $F \leq Q = P \leq W \rightarrow F \leq W$ )

II.  $C < Z \rightarrow$  False (as  $C \geq P = Q < Z \rightarrow$  thus, relation between C and Z cannot be determined)

III.  $Q = C \rightarrow$  False (as  $C \geq P = Q; C \geq Q \rightarrow$  thus clear relation between R and Z cannot be determined)

IV.  $S < C \rightarrow$  True (as  $C \geq P = Q > S \rightarrow S < C$ )

Therefore, only conclusion IV is true.

### Question 5.

**Directions:** In the following question assuming the given statements to be true, find which of the conclusion among given conclusions is /are definitely true and then give your answers accordingly.

#### Statements

$N = Q \geq P > O; T \geq R = S; R \geq A = P < Z$

#### Conclusions:

I.  $Z > S$

II.  $O < N$

III.  $T = Q$

IV.  $O < R$

1) None is true

2) Only I is true

3) Only II and III are true

4) Only II and IV are true

5) Only IV is true

Ans: 5 (4)

#### Solution:

Given statements:  $T \geq R = S; N = Q \geq P > O; R \geq A = P < Z$

On combining:  $N = Q \geq P = A \leq R \leq T; R = S; P > O$

#### Conclusions:

I.  $Z > S \rightarrow$  False (as  $S = R \geq A = P < Z \rightarrow$  thus clear relation between S and Z cannot be determined)

II.  $O < N \rightarrow$  True (as  $N = Q \geq P > O \rightarrow N > O$ )

III.  $T = Q \rightarrow$  False (as  $Q \geq P = A \leq R \leq T \rightarrow$  thus clear relation between T and Q cannot be determined)

IV.  $O < R \rightarrow$  True (as  $R \geq A = P > O \rightarrow O < R$ )

Therefore, Only II and IV are true.



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