INEQUALITY SHORT TRICKS & QUESTIONS WITH SOLUTIONS

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In Reasoning Part, another important Topic is Inequality Problems. In inequality problems, each problem will have a statement followed by conclusions. We can easily score 4-5 marks from this topic in few minutes. Inequality is common topic for all competitive exams. It is one of the topic, where you can get full marks very easily. We are going to explain a very simple method and we assure you that it’s possible to solve 5 questions in just one minutes. So, let’s learn this topic.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>&gt;</td>
<td>First element is Greater than Second element.</td>
</tr>
<tr>
<td>2.</td>
<td>&lt;</td>
<td>First element is Smaller than Second element.</td>
</tr>
<tr>
<td>3.</td>
<td>=</td>
<td>First element is Equals to Second element.</td>
</tr>
<tr>
<td>4.</td>
<td>≥</td>
<td>First element is Greater than or Equals to Second element.</td>
</tr>
<tr>
<td>5.</td>
<td>≤</td>
<td>First element is Smaller than or Equals to Second element.</td>
</tr>
<tr>
<td>6.</td>
<td>≠</td>
<td>First element is either greater than or smaller than Second element.</td>
</tr>
</tbody>
</table>

RULES:

“>” (more than) & “≥” (more than equal to) symbol explanation:

If the conclusion contains “>” (more than) symbol:

1. It will satifies if, “>” (more than) symbol present in the statement between objects.
2. It will also follow “= (equal to)”, “≥ (more than equal to)” symbols but “> (more than)” symbol must be present at least in statement between the objects as per the conclusion.

If the conclusion contains “≥” (more than equal to) symbol:

1. It will satisfies if, “≥” (more than equal to) symbol present in the statement between objects.
2. It will also follow “= (equal to)” symbol, but “≥ (more than equal to)” symbol must be present at least in statement between the objects as per the conclusion.

Note: if the statement contains “≥ (more than equal to)” symbol, and conclusion has “= (equal to)” & “> (more than) symbol, in this case either option will come into existence.

Example:

Statement:  
\[ P ≥ Q ≥ R ≥ S = T ≥ U ≥ W \]

Conclusion:
\[ a) \ P > R \]
\[ b) \ P > S \]
\[ c) \ P > T \]
\[ d) \ P > U \]
\[ e) \ P > W \]
\[ f) \ P > R \]
\[ g) \ P ≥ S \]
\[ h) \ P ≥ T \]
\[ i) \ P = T \]
\[ j) \ P = R \]
\[ k) \ P > R \]
\[ l) \ P > S \]
\[ m) \ P = S \]

FALSE

TRUE

“<” (less than) & “≤” (less than equal to) symbol explanation:
If the conclusion contains “<” (less than) symbol:

1. It will satisfy if, “<” (less than) symbol present in the statement between objects.
2. It will also follow “= (equal to)”, “≤ (less than equal to)” symbols but “< (less than)” symbol must be present at least in statement between the objects as per the conclusion.

If the conclusion contains “≤” (less than equal to) symbol:

1. It will satisfy if, “≤” (less than equal to) symbol present in the statement between objects.
2. It will also follow “= (equal to)” symbol, but “≤ (less than equal to)” symbol must be present at least in statement between the objects as per the conclusion.

Note: if the statement contains “≤ (less than equal to)” symbol, and conclusion has “= (equal to)” & “< (less than) symbol, in this case either option will come into existence.

Example 1:
Statement:
P < Q > R < S > T

Conclusion:

<table>
<thead>
<tr>
<th>n) P &lt; R</th>
<th>o) P &lt; S</th>
<th>p) P &lt; T</th>
<th>q) Q &gt; T</th>
<th>r) Q &gt; S</th>
<th>s) R &gt; T</th>
</tr>
</thead>
</table>

Explanation: Sign used in statement as compared to conclusions are opposite, so the conclusion will be false.

Example 2:
Statement:
P ≥ Q ≤ R ≥ S ≤ T

Conclusion:

<table>
<thead>
<tr>
<th>a) P ≥ R</th>
<th>b) P ≥ S</th>
<th>c) P ≥ T</th>
<th>d) Q ≤ T</th>
<th>e) Q ≤ S</th>
<th>f) R ≤ T</th>
</tr>
</thead>
</table>

Important Points: -

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**Explanation:** Sign used in statement as compared to conclusions are opposite, so the conclusion will be false.

<table>
<thead>
<tr>
<th>Sign</th>
<th>Sign</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;</td>
<td>&gt;</td>
<td>True</td>
</tr>
<tr>
<td>&gt;</td>
<td>≥</td>
<td>True</td>
</tr>
<tr>
<td>≥</td>
<td>≥</td>
<td>True</td>
</tr>
<tr>
<td>&lt;</td>
<td>&lt;</td>
<td>True</td>
</tr>
<tr>
<td>≤</td>
<td>≤</td>
<td>True</td>
</tr>
</tbody>
</table>

**Example 3:**

**Important conclusion Based on Statement**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Statement</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A &gt; B &gt; C</td>
<td>A &gt; C</td>
</tr>
<tr>
<td>2.</td>
<td>A &gt; B ≥ C</td>
<td>A &gt; C</td>
</tr>
<tr>
<td>3.</td>
<td>A ≥ B &gt; C</td>
<td>A &gt; C</td>
</tr>
<tr>
<td>4.</td>
<td>A = B &gt; C</td>
<td>A &gt; C</td>
</tr>
<tr>
<td>5.</td>
<td>A &gt; B = C</td>
<td>A &gt; C</td>
</tr>
<tr>
<td>6.</td>
<td>A &lt; B &lt; C</td>
<td>A &lt; C</td>
</tr>
<tr>
<td>7.</td>
<td>A &lt; B ≤ C</td>
<td>A &lt; C</td>
</tr>
<tr>
<td>8.</td>
<td>A ≤ B &lt; C</td>
<td>A &lt; C</td>
</tr>
<tr>
<td>9.</td>
<td>A = B &lt; C</td>
<td>A = B ≤ C (Either A&gt;C or A=C)</td>
</tr>
<tr>
<td>10.</td>
<td>A &lt; B = C</td>
<td>A &lt; B = C</td>
</tr>
<tr>
<td>11.</td>
<td>A ≥ B ≥ C</td>
<td>A ≥ B ≥ C</td>
</tr>
<tr>
<td>12.</td>
<td>A = B ≥ C</td>
<td>A ≥ B ≥ C (Either A&gt;C or A=C)</td>
</tr>
<tr>
<td>13.</td>
<td>A ≥ B = C</td>
<td>A ≥ B = C</td>
</tr>
<tr>
<td>14.</td>
<td>A ≤ B ≤ C</td>
<td>A ≤ B ≤ C</td>
</tr>
<tr>
<td>15.</td>
<td>A = B ≤ C</td>
<td>A = B ≤ C</td>
</tr>
<tr>
<td>16.</td>
<td>A ≤ B = C</td>
<td>A ≤ B = C</td>
</tr>
<tr>
<td>17.</td>
<td>A &lt; B &gt; C</td>
<td>Either 1 or 2 follows if any of the following cases (a, b, c and d) are given as they form a complementary pair.</td>
</tr>
<tr>
<td>18.</td>
<td>A ≤ B &gt; C</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>A &lt; B ≥ C</td>
<td></td>
</tr>
</tbody>
</table>

**Statement:**

\[ P \leq Q \leq R \leq S \leq T \]

**Conclusion:**

a) \( P \leq R \)
b) \( P \leq S \)
c) \( P \leq T \)
d) \( Q \leq T \)
e) \( Q \leq S \)
f) \( R \leq T \)

**Explanation:** Sign used in statement as compared to conclusions are SAME, so the conclusion will be TRUE.
20. \( A > B < C \)  
   a) 1. \( A > C \)  2. \( A \leq C \)  
   b) 1. \( A \geq C \)  2. \( A < C \)  

21. \( A > B \leq C \)  

22. \( A \geq B < C \)  
   c) 1. \( A < C \)  2. \( A \geq C \)  
   d) 1. \( A \leq C \)  2. \( A > C \)  

Example of Coded Inequality in Reasoning

Directions: In the following questions, the symbols \( \delta, @, \circ, \% \) and \( \star \) are used with the following meaning as illustrated below.

\( A \circ B \) means ‘\( A \) is not smaller than \( B \)’.
\( A \% B \) means ‘\( A \) is neither smaller than nor equal to \( B \)’.
\( A \star B \) means ‘\( A \) is neither greater than nor equal to \( B \)’.
\( A \delta B \) means ‘\( A \) is not greater than \( B \)’.
\( A @ B \) means ‘\( A \) is neither greater than nor smaller than \( B \)’.

Now in each of the following questions assuming the given statements to be true, find which of the four conclusions I, II, III and IV given below them is / are definitely true and give your answer accordingly.

**Statements:**
\( P \delta T, T @ R, R \circ O, O \% K \)

**Conclusions:**
I. \( R @ P \) 
II. \( R \% P \) 
III. \( K \star T \) 
IV. \( O \delta T \)

1) Only either I or II is true  
2) Only III and IV are true  
3) Only either I or II and III are true  
4) Only either I or II and IV are true  
5) Only either I or II and III and IV are true

Follow the steps given below to simplify the process.

**Steps Involved in Solving Coded Inequality in Reasoning**

**Step 1: Make Decoding Table.**

The easiest method is to first make a table as shown below.

<table>
<thead>
<tr>
<th>A is</th>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Than B</td>
</tr>
</tbody>
</table>

**NOTE:** Elements used in question are \( A \) and \( B \) so we have added \( A \) and \( B \) in table.

**TIP:** Sometimes, to make questions more complicated, reverse relations may be given as:
\( A \star B \) means ‘\( B \) is not smaller than \( A \)’.
So here we will write \( B \) in the first row and \( A \) in the last row.

**Step 2: Add Symbols to Table**

<table>
<thead>
<tr>
<th>A is</th>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>@</td>
<td></td>
</tr>
</tbody>
</table>

1) Only either I or II is true  
2) Only III and IV are true  
3) Only either I or II and III are true  
4) Only either I or II and IV are true  
5) Only either I or II and III and IV are true
**Step 3:** Start decoding symbols one by one. Then add decoded operator into the table. 

Here symbols are: 
- © → not smaller than → means greater than or equal to → ‘≥’
- % → neither smaller than nor equal to → means greater than → ‘>’
- ⋆ → neither greater than nor equal to → means smaller than → ‘<’
- δ → not greater than → means smaller than or equal to → ‘≤’
- @ → neither greater than nor smaller than → means equal to → ‘=’

So our decoding table becomes:

<table>
<thead>
<tr>
<th>A is</th>
<th>Symbol</th>
<th>%</th>
<th>⋆</th>
<th>δ</th>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>©</td>
<td>≥</td>
<td>&gt;</td>
<td>&lt;</td>
<td>≤</td>
</tr>
<tr>
<td>Than B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We will now use this decoding table to solve the actual questions.

**Step 4: Decode Statements using Decoding Table.**

<table>
<thead>
<tr>
<th>Statements:</th>
<th>P δ T, T @ R, R © O, O % K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decoded statements:</td>
<td>P ≤ T, T = R, R ≥ O, O &gt; K</td>
</tr>
</tbody>
</table>

**Step 5: Combine Decoded Statements**

Combined statement will be: P ≤ T = R ≥ O > K

**Step 6: Conclude Individually**

Look at conclusions one by one, decode each conclusion using the Decoding Table.

Then check whether the conclusion follows or not.

<table>
<thead>
<tr>
<th>A is</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbol</td>
</tr>
<tr>
<td>Meaning</td>
</tr>
<tr>
<td>Than B</td>
</tr>
</tbody>
</table>

**Conclusion I:** R @ P → R = P

Now from the combined statement we get, P ≤ T = R. According to priority level we get, P ≤ R. Thus R = P is false.

**Conclusion II:** R % P → R > P

From the combined statement we get, P ≤ T = R. Thus again we get P ≤ R. So R > P is false.

But we know from the combined statement that P ≤ R. Hence either conclusion I or II has to be true as they form complementary pair.
# Inequality Questions with Solutions

**Directions (1 – 5): In the following questions the symbols #, *, @, $ and = are used with the following meanings:**

1) **A # B** means A is greater than B.
2) **A * B** means A is greater than or equal to B.
3) **A @ B** means A is equal to B.
4) **A $ B** means A is lesser than B.
5) **A = B** means A is lesser than or equal to B.

Now in each of the following questions, assuming the three statements to be true, find which of the two conclusions I and II given below them is/are true. Give answer.

1. Statements: P # Q, R $ P, R * O
   Conclusions:
   I. Q # R
   II. Q $ R

2. Statements: P = Q, T @ R, R # P
   Conclusions:
   I. T = Q
   II. Q * T

3. Statements: P @ Q, L @ M, P # L
   Conclusions:
   I. Q # M
   II. M $ P

4. Statements: P # M # L, L # N @ Q, Q $ S @ R
   Conclusions:
   I. R @ M
   II. L @ R

5. Statements: P * Q, Q @ T, T * L
   Conclusions:
   I. Q # L
   II. T # P

**Directions (Q. 6 - 10): In the questions given below, certain symbols are used with the following meaning:**

1) **P @ Q** means P is greater than Q.
2) **P + Q** means P is either greater than or equal to Q.
3) **P = Q** means P is equal to Q.
4) **P © Q** means P is smaller than Q.
5) **P - Q** means P is either smaller than or equal to Q.

Now in each of the following questions assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true?

Give answer
a) if only conclusion I is true,
b) if only conclusion II is true,
c) if either I or II is true,
d) if neither I nor II is true, and
e) if both I and II are true.

6. Statements: B @ V, K © C, C - B
   Conclusions:
   I. V @ C
   II. B @ K

7. Statements: K @ T, $ = K, T - R
Conclusions:
I. S @ R
II. T = R

8. Statements: U = M, P + U, M @ B
Conclusions:
I. P = B
II. P @ B

Conclusions:
I. J = L
II. P = N

10. Statements: H + G, D @ E, H = E
Conclusions:
I. D @ H
II. G © D.

Directions (Q. 11 - 15): In the questions given below, certain symbols are used with the following meaning:
1) A @ B means A is greater than B.
2) A + B means A is either greater than or equal to B.
3) A # B means A is smaller than B.
4) A % B means A is either smaller than or equal to B.
5) A $ B means A is equal to B.

Now in each of the following questions assuming the given statements to be true find which of the two conclusions I and II given below them is/are definitely true? Give answer
a) if only conclusion I is true.
b) if only conclusion II is true.
c) if either I or II is true.
d) if neither I nor II is true.
e) if both I and II are true.

11. Statements: T $ G, K @ P, M # T, P + M
Conclusions:
I. K @ T
II. G $ P

12. Statements: R + N, S % B, A @ R, B $ A
Conclusions:
I. S $ N
II. A @ N

13. Statements: G $ K, F @ J, K + Q, Q + F
Conclusions:
I. K $ F
II. F < K

14. Statements: W @ S, K % Z, U + W, S $ K
Conclusions:
I. U @ K
II. Z $ S

15. Statements: G $ E, D # K, E # S, K × G
Conclusions:
I. S @ D
II. D# E

Directions (Q. 16-20): In the following questions the symbol $, @, *, ** and # are used with the following meaning.
1) A $ B means A is greater than B
2) A @ B means A is either greater than or equal to B
3) A * B means A is equal to B
4) A ** B means A is smaller than B
5) A # B means A is either smaller than or equal to B
Now in each of the following questions assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely True? Give answer

a) if only conclusion I is true.
b) if only conclusion II is true.
c) if either I or II is true.
d) if neither I nor II is true.
e) if both I and II are true.

16. Statements: P @ Q, M # N, N**Q
Conclusions:
I. P $ M
II. N # P

17. Statements: D**X, F @ Y, D $ F
Conclusions:
I. X @ Y
II. Y # D

18. Statements: M**P, S $ T, M @ T
Conclusions:
I. S * M
II. T ** P

Conclusions:
I. W $ V
II. U ** X

20. Statements: G $ H, J # K, H * K
Conclusions:
I. H $ J
II. J * H

Directions (Q, 21-25): In the following questions the symbols $, @, *, # and ? are used with the following meanings.
1) A $ B means A is greater than B.
2) A @ B means A is either greater than or equal to B.
3) A * B means A is equal to B.
4) A # B means A is smaller than B.
5) A ? B means A is either smaller than or equal to B.

Now in each of the following questions assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true? Give answer.

a) If only conclusion I is true.
b) If only conclusion II is true.
c) If either I or II is true.
d) If neither I nor II is true.
e) If both I and II are true.

21. Statements: M # N, T $ U, N # U
Conclusions:
I. M ? T
II. T $ N

22. Statements: P $ T, G ? N, T @ N
Conclusions:
I. P $ N
II. G ? T

23. Statements: P ? Q, R $ S, Q @ S
Conclusions:
I. P $ S
II. R # Q

24. Statements: J # K, K * F, H @ F
Conclusions:
I. J ? H
II. H $ K

25. Statements: D @ F, G $ H, F ? H
Conclusions:
I. G $ F
II. D @ H

Directions (Q. 26-30): In the questions given below, certain symbols are used with the following meanings:
1) A @ B means A is greater than B.
2) A * B means A is either greater than or equal to B.
3) A # B means A is equal to B.
4) A $ B means A is either smaller than or equal to B.
5) A + B means A is smaller than B.

Now in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true? Give answer
a) if only conclusion I is true
b) if only conclusion II is true
c) if either conclusion I or II is true
d) if neither conclusion I nor II is true
e) if both conclusions I and II are true

26. Statements: B + D; E $ T; T * P; P @ B
Conclusions:
I. P$D
II. P@D

27. Statements: E * F; G $ H; H # E; G @ K
Conclusions:
I. H@K
II. H*F

28. Statements: P $ Q; N # M; M @ R; R * P
Conclusions:
I. P+N
II. Q$M

29. Statements: D + T; E $ V; F * T; E @ D
Conclusions:
I. D$V
II. D + F

30. Statements: T*U; U $ W; V @ L; W + V
Conclusions:
I. V @ T
II. L # W

Directions (Q. 31-35): In the following questions, the symbols +, ×, =, ÷, and - are used with the following meaning:
1) P + Q means P is greater than Q.
2) P×Q means P is either greater than or equal to Q.
3) P = Q means P is equal to Q.
4) P ÷ Q means P is smaller than Q.
5) P - Q means P is either smaller than or equal to Q.

Now in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true. Give answer
a) if only conclusion I is true
b) if only conclusion II is true
c) if either conclusion I or II is true
d) if neither conclusion I nor II is true
e) if both conclusions I and II are true

31. Statements: U + V, W - Y, Y × U
Conclusions:
I. W + U
II. W ÷ V

32. Statements: B ÷ A, D × E, E + A
Conclusions:
I. D + A
II. B ÷ E
33. **Statements**: $S \times Q, R + T, R - S$

**Conclusions**:
I. $S + T$
II. $Q = T$

34. **Statements**: $M \div N, P \times Q, P + N$

**Conclusions**:
I. $N + Q$
II. $N - Q$

35. **Statements**: $G - H, K \times L, L - G$

**Conclusions**:
I. $G \div K$
II. $L - H$

**Directions (Q. 36-40)**: In the following questions the symbols @, c, £, ?, and $ are used with the following meanings:
1. $A @ B$ means $A$ is neither equal to nor smaller than $B$.
2. $A c B$ means $A$ is neither greater nor smaller than $B$.
3. $A £ B$ means $A$ is not equal to $B$.
4. $A ? B$ means $A$ is neither greater than nor equal to $B$.
5. $A $ B$ means $A$ is either greater or equal to $B$.

Now, in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true. Give answer
a) if only conclusion I is true
b) if only conclusion II is true
c) if either I or II is true
d) if neither I nor II is true
e) if both I and II are true

36. **Statements**: $N ? S, S @ P, P £ M$

**Conclusions**:
I. $S @ M$
II. $PcN$

37. **Statements**: $JcP, P$N, $JfH$

**Conclusions**:
I. $JcN$
II. $H@P$

38. **Statements**: $Z @ D, F c D, F $ G$

**Conclusions**:
I. $DcG$
II. $Z@G$

39. **Statements**: $L @ T, P ? T, K$L

**Conclusions**:
I. $L@P$
II. $K@T$

40. **Statements**: $R c U, U ? Q, W $ R$

**Conclusions**:
I. $WcU$
II. $W@U$

**Directions (Q. 41-45)**: In the following questions, certain symbols are used with the following meanings:
1. $A # B$ means $A$ is not greater than $B$.
2. $A $ B$ means $A$ is neither smaller than nor equal to $B$.
3. $A ? B$ means $A$ is neither greater than nor equal to $B$.
4. $A * B$ means $A$ is neither greater than nor equal to $B$.
5. $A @ B$ means $A$ is not smaller than $B$.

Now, in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true. Give answer
a) if only conclusion I is true;
b) if only conclusion II is true;
c) if either I or II is true;
d) if neither I nor II is true; and
e) if both I and II are true.

41. Statements: \( P \$ Q, R @ S, P \ast R \)
Conclusions:
I. \( Q \ast R \)
II. \( P \# S \)

42. Statements: \( U \$ V, W \times X, U @ X \)
Conclusions:
I. \( V @ X \)
II. \( V \times X \)

43. Statements: \( K \# T, D \$ F, T \times F \)
Conclusions:
I. \( K \ast D \)
II. \( D \$ T \)

44. Statements: \( M \$ N, G@H, N？H \)
Conclusions:
I. \( M \# G \)
II. \( M \times M \)

45. Statements: \( G@M, N\#L, G*L \)
Conclusions:
I. \( G@N \)
II. \( L \$ M \)

Directions (Q. 46-50): In the following questions, the symbols @, &,, *, $ and ? are used with the following meanings:
1) \( P \times Q \) means \( P \) is either greater than or equal to \( Q \).
2) \( P \$ Q \) means \( P \) is neither greater than nor smaller than \( Q \).
3) \( P \ast Q \) means \( P \) is neither greater than nor equal to \( Q \).
4) \( P \# Q \) means \( P \) is either greater than or equal to \( Q \).
5) \( P \& Q \) means \( P \) is not equal to \( Q \).

Now in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true. Give answer
a) if only conclusion I is true;
b) if only conclusion II is true;
c) if either I or II is true;
d) if neither I nor II is true; and
e) if both I and II are true.

46. Statements: \( K$M, N&M, J@K \)
Conclusions:
I. \( J \times M \)
II. \( K \# N \)

47. Statements: \( K @ R, L & B, B \times K \)
Conclusions:
I. \( B \times R \)
II. \( R \times L \)

48. Statements: \( J*M, W$E, J@W \)
Conclusions:
I. \( M \times W \)
II. \( J \times E \)

49. Statements: \( R @ S, S \times U, T \$ R \)
Conclusions:
I. \( T \times S \)
II. \( T \# U \)

50. Statements: \( A*B, B \times C, C \# D \)
Conclusions:
I. \( A\times D \)
II. \( B \# D \)
Directions (Q. 51-57): In the following questions the symbols +, *, ?, @ and $ are used with the following meanings:

1) P + Q means P is neither smaller nor greater than Q.
2) P × Q means P is neither equal to nor smaller than Q.
3) P ? Q means P is neither greater than nor equal to Q.
4) P @ Q means P is either greater than or equal to Q.
5) P $ Q means P is not equal to Q.

51. Statements: P$Q, Q×R, P + R
Conclusions:
I. Q × P
II. P ? Q
III. R x P
A. I only
B. I and II only
C. Either I or III only
D. All I, II and III
E. None follows

52. Statements: A + B, B $ C, C ? A
Conclusions:
I. C $ A
II. B+C
III. C ? A
A. None follows
B. Only I
C. Only II
D. Only III
E. None follows

53. Statements: Y@Z, Z × Q, Q $ P
Conclusions:
I. Y ? Q
II. Y ? P
III. Z @ P
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

54. Statements: E × F, F @ L, L + N
Conclusions:
I. N + F
II. E × L
III. E x N
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

55. Statements: H@J, J ? K, K × M
Conclusions:
I. H @ M
II. M × J
III. H x K
A. None follows
B. Only I
C. Only II
D. Only III
E. None follows

56. Statements: M@T, T + V, V?E
Conclusions:
I. V + M
II. V ? M
III. E x T
A. Only either I or II
B. Only III
C. Only I & II
D. All I, II & III
E. Only either I or II and III

57. Statements: H@J, J ? K, K × M
Conclusions:
I. H @ K
II. M × H
III. H × K
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

Directions (Q. 58-62): In the following questions the symbols *, ×, S, @ and + are used with the following meaning:

1) 'P×Q' means 'P is neither smaller nor greater than Q'
2) 'P@Q' means 'P is neither equal to nor greater than Q'
3) 'P*Q' means 'P is either equal to or smaller than Q'
4) 'P+Q' means 'P is neither equal to nor smaller than Q'.
5) 'P$Q' means 'P is not equal to Q'.

58. Statements: D*F, F$M, M@K
Conclusions:
I. F @ K
II. D @ K
III. D * M
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

59. Statements: K + M, M@R, R × T
Conclusions:
I. K + T
II. T + M
III. R + K
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

60. Statements: T@M, M*R, R × N
Conclusions:
I. M × N
II. M @ N
III. R × N
A. I only
B. II and III only
C. Either I or II only
D. All I, II and III
E. None follows

61. Statements: B $ N, N × R, R + T
Conclusions:
I. B $ R
II. T @ N
III. N + T
A. Only either I or II
B. Only III
C. Only I & II
D. All I, II and III
E. None follows

62. Statements: N × P, K + P, Q @ K
Conclusions:
I. K + N
II. Q + N
III. Q + P
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III
Directions (Q. 63-67): In the following questions, the symbols $, ©, ×, @ and # are used with the following meanings:
1) P $ Q means P is not smaller than Q.
2) P © Q means P is neither greater than nor smaller than Q.
3) P @ Q means P is not greater than Q.
4) P × Q means P is neither smaller than nor equal to Q.
5) P # Q means P is neither greater than nor equal to Q.

63. Statements: Z$K, K × T, T©F
Conclusions:
I. F # Z
II. Z × T
III. K x T
A. Only II
B. Only I and II
C. Only I
D. Only II and III
E. All follow

64. Statements: K × B, B @ D, D # K
Conclusions:
I. B @ K
II. B # K
III. K x D
A. Only II
B. Only I and II
C. Only III
D. Only II and III
E. All follows

65. Statements: N©R, R@M, M$J
Conclusions:
I. N © M
II. N # M
III. R x J
A. Only either I or II

66. Statements: S $ T, T©R, R # M
Conclusions:
I. M × T
II. R x S
III. M © T
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

67. Statements: H@V, V©M, M × R
Conclusions:
I. R × H
II. H × R
III. H x M
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

Directions (Q. 68-72): In the following questions, the symbols @, ©, *, $ and # is used with the following meaning:
'A © B' means 'A is not smaller than B'.
'A * B' means 'A is not greater then B'.
'A @ B' means 'A is neither smaller than nor equal to B'.
'A $ B' means 'A is neither smaller than nor greater than B'.
'A # B' means 'A is neither greater than nor equal to B'.

68. Statements: Z#N, F©N, F*K
Conclusion:
69. Statements: D $ T, T © M, M # K
Conclusions:
I. M $ D
II. D @ M
III. K @ T
A. I only
B. I and II only
C. Either I or II only
D. All I, II and III
E. None of these

70. Statements: W © A, B * A, B @ M
Conclusions:
I. B # W
II. W $ B
III. W @ M
A. Only either I or II
B. Only III
C. Only I & II
D. All I, II & III
E. Only either I or II and III

71. Statements: J * M, M $ N, N # T
Conclusions:
I. T @ J
II. T $ J
III. T @ M
A. Only I and II
B. Only II and III
C. Only I and III
D. None follows

72. Statements: V * F, F @ R, R © G
Conclusions:
I. G # V
II. G @ V
III. V @ R
A. Only I and II
B. Only II and III
C. Only I and III
D. None follows
E. None of these

Directions (Q 73-80): In the questions given below, certain symbols are used with the following meanings:
1) P $ Q means P is neither equal to nor smaller than Q.
2) P © Q means P is not smaller than Q.
3) P * Q means P is neither greater nor smaller than Q.
4) P # Q means P is neither greater than nor equal to Q.
5) P @ Q means P is not greater than Q.

73. Statement: M # K, K * D, D @ P
Conclusions:
I. M @ P
II. M $ P
III. P $ K
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

74. Statements: W © T, T $ M, B # M
Conclusions:
I. W $ B
II. M # W
**III. T $ B**
A. I only
B. I and II only
C. Either I or III only
D. All I, II and III
E. None follows.

75. **Statements**: H*D, D#R, R©N
**Conclusions**:  
I. N * H
II. N $ H
III. H $ R
A. Only I and II
B. Only II and III
C. Only I and III
D. None follows
E. None of these

76. **Statements**: Z@R, R©D, D#T
**Conclusions**:  
I. D # Z
II. Z # T
III. R $ T
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

77. **Statement**: Q#P, P@F, F*M
**Conclusions**:  
I. M $ P
II. P * M
III. M $ Q
A. Only either I or II
B. Only III
C. Only I & II
D. All I, II & III
E. Only either I or II and III

78. **Statements**: E$J, J#H, H©M
**Conclusions**:  
I. E $ M
II. J $ M
III. E $ H
A. Only I and II
B. Only II and III
C. Only I and III
D. None follows
E. None of these

79. **Statements**: R©P, P$M, M@D
**Conclusions**:  
I. D $ R
II. M # R
III. D $ P
A. None follows
B. Only II & III
C. Only I
D. Only II
E. Only III

80. **Statements**: F#K, K©D, N@D
**Conclusions**:  
I. N * K
II. F $ D
III. N # K.
A. I only
B. I and II only
C. Either I or III only
D. All I, II and III
E. None follows.

81. **Statements**: H % J, J © N, N @ R
**Conclusions**:  
I. R % J
II. H @ J
III. N @ H
(1) Only II
(2) Only I and III
82. Statement: \(M @ J\), \(J $ T\), \(T © N\)
Conclusions:
1. \(N # J\)
2. \(T % M\)
3. \(M @ N\)
(1) Only I and II
(2) Only II and III
(3) Only I and III
(4) None follows
(5) All follows

83. Statement: \(D © K\), \(K # F\), \(F @ P\)
Conclusions:
1. \(P @ D\)
2. \(K # P\)
3. \(F $ D\)
(1) Only II
(2) Only I and II
(3) Only III
(4) Only II and III
(5) None of These

84. Statement: \(K # N\), \(N $ T\), \(T % J\)
Conclusions:
1. \(J @ N\)
2. \(K @ T\)
3. \(T @ K\)
(1) None follows
(2) Only I and II
(3) Only II and III
(4) Only I and III
(5) None of These

85. Statement: \(M @ D\), \(D © V\), \(V $ W\)
Conclusions:
1. \(W @ M\)
2. \(M % V\)
3. \(D $ W\)
(1) Only I and II
(2) Only II and III
(3) Only I and III
(4) Only III
(5) None of These

In the following questions (86-90), the symbol \(\times, \partial, \%, \©, @\), are used with the following illustrations.

\(P % Q\) means \(P\) is not smaller than \(Q\)
\(P © Q\) means \(P\) is neither smaller than nor equal to \(Q\)
\(P \times Q\) means \(P\) is neither greater than nor equal to \(Q\)
\(P \partial Q\) means \(P\) is not greater than \(Q\)
\(P @ Q\) means \(P\) is neither greater than nor smaller than \(Q\)

86. Statement – \(R \partial K\); \(K \times M\); \(M @ J\)
Conclusions:
1. \(J © K\)
2. \(M © R\)
3. \(R \times J\)
A. Only I & I
B. Only II & III
C. Only I & III
D. All I, II & III
E. None of these

87. Statements – \(Z @ M\); \(M © K\); \(K \times F\)
Conclusions:
1. \(F © Z\)
2. \(K \times Z\)
3. \(F © M\)
A. None follows
B. Only I
C. Only II
D. Only III
E. None of these
88. Statements – $V \% H ; H @ F ; F \& E$
Conclusions :
I. $F \& V$
II. $F \& V$
III. $E \% H$
A. Only either I or II
B. Only III
C. Only I & II
D. All I, II & III
E. Only either I or II and III

89. Statements – $W \& T ; T \& N ; N \% D$
Conclusions :
I. $D \& T$
II. $W \& N$
III. $D \& T$
A. None follows
B. Only I
C. Only II
D. Only III
E. Only II & III

90. Statements – $Y \& G ; G \& K ; K \& R$
Conclusions :
I. $R \& G$
II. $K \& Y$
III. $R \& G$
A. None follows
B. Only I
C. Only II
D. Only III
E. Only I & II

91. Statements: $H \% J, J \& N, N \& R$
Conclusions:
I. $R \& J$
II. $H \& J$
III. $N \& H$
A. Only II
B. Only I and III
C. Only I
D. Only III
E. None of these

92. Statements: $M \& J, J \& T, T \& N$
Conclusions:
I. $N \& J$
II. $T \& M$
III. $M \& N$
A. Only I and II
B. Only II and III
C. Only I and III
D. None follows
E. All follows

93. Statements: $D \& K, K \& F, F \& P$
Conclusions:
I. $P \& D$
II. $K \& P$
III. $F \& D$
A. Only II
B. Only I and II
C. Only III
D. Only II and III
E. None of these

In the following questions (91-95), the Symbols $@, \&, $, \%, and \# are used with the following meanings as illustrated below.
'A $ B' means 'A is not smaller than B'.
'B @ A' means 'A is neither smaller than nor equal to B'.
94. Statements: K $ N, N % T, T $ J
Conclusions:
I. J @ N
II. K @ T
III. T @ K
A. Only I and II
B. Only II and III
C. Only I and III
D. None follows
E. None of these

95. B © K, K $ L, L @ P
Conclusions:
I. P @ B
II. K # P
III. L $ B
A. Only II
B. Only I and II
C. Only III
D. Only II and III
E. None of these

In the following questions (96-100), the Symbols @, #, $, % and * are used with the following meanings as illustrated below.
'A $ B' means 'A is not smaller than B'.
'A % B' means 'A is not greater then B'.
'A @ B' means 'A is neither smaller than nor equal to B'.
'A * B' means 'A is neither greater than nor smaller than B'.
'A # B' means 'A is neither greater than nor equal to B'.

In each of the following question assuming the given statements to be true, find out which of the three conclusions I, II and III given below them is/are definitely true.

96. Statements: D * Q, Q @ L, L $ B, B # G
Conclusions:
I. D @ B
II. B * D
III. G @ L
A. Either I or II only
B. I and II only
C. I only
D. II and III only
E. None of these

97. Statements: Z @ Y, Y # K, K % M, M @ T
Conclusions:
I. Z @ M
II. Y @ T
III. Z # K
A. I only
B. II and III only
C. Either I or II only
D. All I, II and III
E. None of these

98. Statements: P # M, M % R, R * T, T # L
Conclusions:
I. P # M
II. P * R
III. M % L
A. I only
B. I and II only
C. Either I or III only
D. All I, II and III
E. None follows

99. Statements: F @ H, M % H, M $ R, G * M
Conclusions:
I. F $ R
II. F @ R
III. H $ G
A. I only
B. II and III only

99. Statements: P # M, M % R, R * T, T # L
Conclusions:
I. P # M
II. P * R
III. M % L
A. I only
B. I and II only
C. Either I or III only
D. All I, II and III
E. None follows

99. Statements: F @ H, M % H, M $ R, G * M
Conclusions:
I. F $ R
II. F @ R
III. H $ G
A. I only
B. II and III only
C. Either I or III only
D. All I, II and III
E. None follows

100. Statements: T @ H, S % H, S $ R, G * S
Conclusions:
I. T $ R
II. T @ R
III. H $ G
A. I only
B. II and III only
C. Either I or III only
D. All I, II and III
E. None follows.

Directions (101-105): In these questions, certain symbols have been used to indicate relationships between elements as follows:
a) P @ Q means P is not smaller than Q.
b) P # Q means P is neither smaller than nor equal to Q.
c) P % Q means P is neither greater than nor smaller than Q.
d) P $ Q means P is not greater than Q.
e) P * Q means P is neither greater than nor equal to Q.
101. Statements: S @ V, V # M, V % F
Conclusions:
I. S # M
II. S @ F
III. M # F
A. None follows
B. Only I follow
C. Only II follow
D. Only III follow
E. Only II & III follows

102. Statements: B $ D, D * F, R % B
Conclusions:
I. F # R
II. R $ D
III. B # F
A. Only I and II follows
B. Only II and III follows
C. Only I and III follows
D. None follows
E. All follows

103. Statements: V # I, I @ J, J $ P
Conclusions:
I. V # J
II. V # P
III. P # I
A. Only II follows
B. Only I and III follows
C. Only I follow
D. Only III follow
E. None of these

104. Statements: C * D, D # T, T $ J
Conclusions:
I. C * T
II. D $ J
III. J # C
A. None follows
B. Only I follow
C. Only II follow
D. Only III follow
E. Only II & III follows

105. Statements: R $ W, W % J, J @ K
Conclusions:
I. R $ K
II. W @ K
III. J @ R
A. Only I and II follows
B. Only II and III follows
C. Only I and III follows
D. None follows
Directions (106-110): In these questions, certain symbols have been used to indicate relationships between elements as follows:
1) A @ B means P is not smaller than Q.
2) A # B means P is not greater than Q.
3) A $ B means P is neither greater than nor smaller than Q.
4) A + B means P is neither smaller than nor equal to Q.
5) A % B means P is neither greater than nor equal to Q.

106. Statements: Y $ W, W @ O, O # H
Conclusions:
I. Y + O
II. H % W
III. H + Y
A. None follows
B. Only I follow
C. Only II follow
D. Only III follow
E. Only II & III follow

107. Statements: B + M, M @ Z, Z $ C
Conclusions:
I. C + M
II. B + Z
III. C + B
A. Only II follows
B. Only I and III follows
C. Only II follow
D. Only III follow
E. None of these

108. Statements: N @ S, S % M, M + H
Conclusions:
I. M # N
II. N + H
III. M + N
A. Only II follows
B. Only I and II follows
C. Only III follows
D. Only II and III follows
E. None of these

109. Statements: L @ U, U + A, A $ G
Conclusions:
I. G $ L
II. L # G
III. L + A
A. None follows
B. Only I follow
C. Only II follow
D. Only III follow
E. Only II & III follows

110. Statements: J # W, W + A, A @ F
Conclusions:
I. F $ W
II. F % W
III. J + F
A. None follows
B. Only I follow
C. Only II follow
D. Only III follow
E. Only II & III follows

Directions (111-115): In these questions, certain symbols have been used to indicate relationships between elements as follows:
1) A % B means A is either smaller than or equal to B.
2) A - B means A is greater than B.
3) A # B means A is neither greater than nor smaller than B.
4) A $ B means A is not smaller than B.
5) A @ B means A is either greater than or equal to B.

111. Statements: U # F, F $ W, W - K
Conclusions:
I. K $ U
II. K # U
III. W @ U
A. Only I and II follows
B. Only II and III follows
C. Only I and III follows
D. None follows
E. All follows

112. Statements: H @ D, D - B, B $ W
Conclusions:
I. B $ H
II. W $ H
III. D $ W
A. Only II follows
B. Only I and III follows
C. Only I follow
D. Only III follow
E. None of these

113. Statements: V $ F, F % P, P - J
Conclusions:
I. J $ F
II. P - V
III. V - J
A. None follows
B. Only I follow
C. Only II follow
D. Only III follow
E. Only II & III follows

114. Statements: Q $ T, T % G, Q - N
Conclusions:
I. Q $ G
II. N $ T
III. N - G
A. Either I or II only follows
B. I and II only follows
C. Only I follow

115. Statements: A $ T, T % C, C @ F
Conclusions:
I. A # T
II. A @ F
III. C - A.
A. Only II follows
B. Only I and II follows
C. Only III follows
D. Only II and III follows
E. None of these

116. Statements: J > S = R < U, N > R = E
Conclusions:
I. J > E
II. S > E
III. U > S
A. Only II follows
B. Only I and III follows
C. Only III follows
D. Only II and III follows
E. None of these

117. Statements: Q = N > X = < Z, L > N
Conclusions:
I. L > Z
II. Q < L
III. L > X
A. Only II follows
B. Only I and III follows
C. Only III follows
D. Only II and III follows
E. None of these

118. Statements: H < Q = T = < P, V > Q
Conclusions:
I. V > P
II. H > V
III. V > H  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows

119. Statements: J ≤ T ≤ L ≥ R, J ≤ C = Q < B  
Conclusions:  
I. B ≥ T  
II. Q ≤ L  
III. R ≥ Q  
A. None follows  
B. Only I follow  
C. Only II follows  
D. Only III follows  
E. Only II & III follows

120. Statements: J ≤ K ≤ L = N, J ≥ C = Q < B  
Conclusions:  
I. N > C  
II. K ≥ Q  
III. J > B  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows

121. Statements: A ≥ N = S > J, P ≥ N  
Conclusions:  
I. A ≥ J  
II. P > J  
III. N < J  
A. Only II follows  
B. Only I and III follows  
C. Only III follows  
D. Only I follow  
E. None of these

122. Statements: P > M ≥ F ≤ R, H ≤ P  
Conclusions:  
I. H > F  
II. P > R  
III. F > P  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows

123. Statements: L ≥ M ≥ Z, B < I ≤ Z  
Conclusions:  
I. M > I  
II. L > B  
III. Z > L  
A. None follows  
B. Only I follow  
C. Only II follows  
D. Only III follows  
E. Only II & III follows

124. Statements: D = U ≤ Q, P > J ≥ D  
Conclusions:  
I. P > U  
II. J ≥ Q  
III. Q > P  
A. Either I or II only follows  
B. I and II only follows  
C. Only I follow  
D. II and III only follows  
E. None of these

125. Statements: E < X = S ≥ O = Z  
Conclusions:  
I. X > Z  
II. Z < S  
III. Z > E  
A. Only II follows  
B. Only I and II follows
126. Statements: A > M >= D > H =< R =< Y < W
Conclusions:
I. A>H
II. W>H
III. R=W
IV. M=Y
A) Only I, II and III follows
B) Only II follows
C) Only I and II follows
D) Only I and either II or IV follows
E) All I, II, III and IV follows

127. Statements: M> U >L =< N; L >= Y > A
Conclusions:
I. Y<N
II. M>N
III. N=Y
IV. M>A
A) Only either II or III follows
B) Only IV and either I or III follows
C) Only IV follows
D) Only II follows
E) Only III follows

128. Statements: G >= B > D = F ; L < B < M
Conclusions:
I. M<J
II. G>L
III. D>L
IV. F<M
A) Only II follows
B) Only I and III follows
C) None follows

129. Statements: E > F =< O =< L; F >= U < T
Conclusions:
I. E>L
II. T<F
III. O>T
IV. L<U
A) Only I follows
B) Only II follows
C) Only III follows
D) None follows
E) Only I and IV follows

130. Statements: N > C =< Y =< R < U = Z =< E
Conclusions:
I. N>R
II. Z=R
III. R>E
IV. Z>C
A) Only I and II follows
B) Only IV follows
C) None follows
D) Only II and IV follows
E) Only II and III follows

131. Statement: Q > N >= R = B =< L < J
Conclusions:
I. J>R
II. Q>=L
III. Q>B
A. Only I and II follows
B. Only II and III follows
C. Only I and III follows
D. None follows
E. None of these

132. Statements: U >=R = C, C >= N > M
Conclusions:
I. \( R > N \)
II. \( U > M \)
III. \( R \geq M \)
A. None follows
B. Only I follow
C. Only II follows
D. Only III follows
E. Only II & III follow

133. Statements: \( D > R < Y, V > W \geq K = Y \)
Conclusions:
I. \( W > D \)
II. \( V \leq Y \)
III. \( V > R \)
A. Only II follows
B. Only I and III follows
C. Only III follows
D. Only II and III follow
E. None of these

134. Statement: \( E > D = G =< H =< I = L \)
Conclusions:
I. \( L > D \)
II. \( D = L \)
III. \( E > I \)
A. Either I or II only follows
B. I and II only follows
C. Only III follows
D. None follows
E. None of these

135. Statement: \( L = B = Z = U < P = R \)
Conclusions:
I. \( L \geq U \)
II. \( Z < R \)
III. \( B > R \)
A. Only II follows
B. Only I and II follows
C. Only III follows
D. Only II and III follow
E. None of these

136. Statement: \( H \geq P = R \geq V < G \geq E > S \)
Conclusions:
I. \( H \geq V \)
II. \( R > E \)
III. \( G > P \)
A. Either I or II only follows
B. I and II only follows
C. Only I follow
D. II and III only follows
E. None of these

137. Statement: \( Q \geq O = R \geq N < F \geq K > S \)
Conclusions:
I. \( F > Q \)
II. \( S < R \)
III. \( Q > N \)
A. Only I and II follows
B. Only II and III follows
C. Only I and III follows
D. None follows
E. None of these

138. Statement: \( A = Z \geq D < V < M =< N \)
Conclusions:
I. \( M > Z \)
II. \( D < N \)
III. \( A > V \)
A. Only II follows
B. Only I and III follows
C. Only III follows
D. Only I follow
E. None of these
139. Statement: \( J < Y =< S > U = W < L < Q = T \) 
Conclusions: 
I. \( Q > U \)  
II. \( W < S \)  
III. \( T > U \)  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows  
A. Only II follows  
B. Only I and III follows  
C. Only III follows  
D. Only I follow  
E. None of these

140. Statement: \( K < X =< V > U = Z < L < P = R \) 
Conclusions: 
I. \( K < Z \)  
II. \( R > U \)  
III. \( V > Z \)  
A. None follows  
B. Only I follow  
C. Only II follows  
D. Only III follows  
E. Only II & III follows  
A. None follows  
B. Only I follow  
C. Only II follows  
D. Only III follows  
E. Only II & III follows

141. Statement: \( Q > H =< U >= C = J < E \) 
Conclusions: 
I. \( Q > J \)  
II. \( E > H \)  
III. \( H >= J \)  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows

142. Statement: \( W > H = I >= C = L < E \) 
Conclusions: 
I. \( E < W \)  
II. \( I >= L \)  
III. \( E > I \)  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows  
A. Only II follows  
B. Only I and III follows  
C. Only III follows  
D. Only I follow  
E. None of these

143. Statement: \( P = R >= E < S = N >= T \) 
Conclusions: 
I. \( P > T \)  
II. \( N > R \)  
III. \( S > P \)  
A. None follows  
B. Only I follow  
C. Only II follows  
D. Only III follows  
E. Only II & III follows  
A. None follows  
B. Only I follow  
C. Only II follows  
D. Only III follows  
E. Only II & III follows

144. Statements: \( C > B >= L, Q = E > P = C \) 
Conclusions: 
I. \( Q > B \)  
II. \( L < E \)  
III. \( Q > L \)  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows  
A. Only I and II follows  
B. Only II and III follows  
C. Only I and III follows  
D. None follows  
E. All follows

145. Statement: \( D =< H = J =< K >=P > R \) 
Conclusions: 
I. \( D = K \)  
II. \( K > D \)  
III. \( K > R \)  
A. Either I or II and III follows  
B. I and II only follows  
C. Only I follow  
D. II and III only follows  
E. None of these  
A. Either I or II and III follows  
B. I and II only follows  
C. Only I follow  
D. II and III only follows  
E. None of these
146. Statement: A >= R > S = Y < W < V
Conclusions:
I. A > Y
II. W > R
III. V > S
A. Only I and II follows
B. Only II and III follows
C. Only I and III follows
D. None follows
E. None of these

147. Statements: A > F >= G, D < H = G
Conclusions:
I. A >= H
II. F >= D
III. D >= G
A. None follows
B. Only I follow
C. Only II follows
D. Only III follows
E. Only II & III follows

148. Statements: O =< U < L, P >= I < C = L
Conclusions:
I. U > I
II. C > O
III. L > I
A. Only I and II follows
B. Only II and III follows
C. Only I and III follows
D. None follows
E. All follows

149. Statement: R >= U > F = E >= X > Z
Conclusions:
I. R > E
II. U > X
III. F > Z
A. Only I and II follows

150. Statement: B > D < T >= V = M >= X > Z
Conclusions:
I. T > X
II. T = X
III. T >= Z
A. Either I or II only follows
B. I and II only follows
C. Only I follow
D. II and III only follows
E. None of these
Solutions

1) Option D. P > Q, R < P, R >= O = Q >= R
2) Option C. P =< Q, T = R, R > P = T =< Q
3) Option E. P = Q, L = M, P > L = Q > M and M < P
4) Option D. P > M > L; L > N = Q; = Q < S = R
5) Option D. P >= Q, Q = T and T >= L = Q > = L
6) Option B B > V..(i); K < C..(ii);
C =< B..(iii)
   V > = C not follows
   B > K follows
7) Option D. K > T..(i); S = K ...(ii);
T =< R...(iii)
   Neither nor follows
8) Option C. U = M..(i); P = U..(ii);
M = = B..(iii)
   P = B of P > B
   Either or follows
9) Option D. L = = N....(i); J =< P...(ii);
P > = L....(iii)
   Neither nor follows
10) Option E. H = = G..(i); D = E...(ii);
H = E...(iii)
   D > H and G < D
   Both follows
11) Option D. T = G, K > P, M < T, P = = M
   Neither nor follows
12) Option B. R = = N, S = < B, A > R, B = A
   S = N not follows
   A > N follows
13) Option C. G = K, F > J, K = = Q, Q = = F
   Either or follows
14) Option A W > S, K =< Z, U = = W, S = K
   U > K follows
   Z > S not follows
15) Option E. G = E, D < K, E < S, K =< G
   Both follows
16) Option A. P > Q...(i), M < N...(ii), N < Q ...(iii)
   P > M follows.
   P > N. not follows
17) Option D. D < X ..(i), F > Y ..(ii), D > F ..(iii)
   Neither nor follows
18) Option B. M < P, S > T, M = = T
   S = M not follows
   T < P follows
19) Option E. U = V, X > W, U < W
   Both follows
20) Option C G > H, J =< K, H = K
   H > J
   J = H
   Either or follows.
21) Option B. M < N...(i), T > U ...(ii); N < U...
   (iii)
   M < T not follows
   T > N follows
22) Option E. P > T, ..(i); G < N...(ii), T > N....
   (iii)
   P > N
   G < T
   Both follows
23) Option D. P < Q ....(i); R > S ....(ii); Q > S .....(iii)
   Neither nor follows
24) Option D. J < K..(i); K = F..(ii); H > F. ..(iii)
   Neither nor follows
25) Option A. D > F....(i); G > H .....(ii) F < H ....(iii)
   G > F follows
D > H not follows.

26) Option C. B < D ... (i), E < T ..... (ii), T > P ....(iii), P > B .... (iv)
Either or follows

27) Option E. E > F .... (i), G < H .... (ii), H = E ..... (iii), G > K ..... (iv)
H > K
H > F
Both follows

28) Option A. P < Q... (i), N = M... (ii), M > R... (iii), R > P... (iv)
N > P follows
Q < M not follows

29) Option B. D < T; E □ V; F □ T; E > D
D =< V follows
D < F not follows

30) Option D. T>=U; U =< W; V > L; W < V
Neither nor follows

31) Option D. U > V .... (i), W < Y .... (ii), Y > U ..... (iii)
Neither nor follows

32) Option E. B < A.... (i), D > E .... (ii), E > A ..... (iii)
D > A.
B < E.
Both follows

33) Option A.. S > Q ... (i), R > T ... (ii), R < S ... (iii)
S > T follows
Q = T not follows

34) Option C. M < N .... (i), P > Q ..... (ii), P > N ..... (iii)
Either or follows

35) Option B. G < H... (i), K > L... (ii), L< G... (iii)
G < K not follows
L =< H follows.

36) Option D. N < S ... (i), S > P ... (ii), P≠ M ... (iii)

Neither nor follows

37) Option D. J = P ... (i), P >= N ... (ii), J ≠ H ... (iii)

38) Option B. Z > D, F = D, F >= G
D=G not follows
Z>G follows

39) Option E. L > T, P < T, K>=L
L>P
K>T
Both follows

40) Option C. R = U, U < Q, W >= R
W=U
W>U
Either or follows.

41) Option A. P > Q ..... (i) R > S ..... (ii), P < R ..... (iii)
R > Q follows
P =< S Not follows

42) Option C. U > V .... (i), W < X ..... (ii), U > X ...... (iii)
V > X
V = X
Either or follows

4) Option E. K < T ... (i), D > F ...(ii), T < F ...(iii)
D > T
D >K
Both follows

44) Option D. M>N, G>=H, N=H
Neither nor follows

45) Option B. G > M..(i), N > L...(ii) G < L .... (iii)
G >= N Not follows
L > M follows.

46) Option D. K=M, N≠M, J>=K
Neither nor follows

47) Option D. K >= R, L ≠ B, B =< K
Neither nor follows

48) Option D. J>M, W=E, J>=W
Neither nor follows
49) Option D. R >= S, S =< U, T = R
Neither nor follows
50) Option D. A>B, B =< C, C => D.
Neither nor follows.
51) Option D P ≠ Q .... (i), Q > R ..... (ii), P = R .... (iii)
   Q > P
   P < Q
   R > P
All follows
52) Option B A = B ..... (i) B ≠ C ..... (ii), C < A ..... (iii)
   C ≠ A follows
   B = C not follows
   C =>A not follows
53) Option A Y = Z ...(i), Z > Q ... (ii), Q ≠ P ...(iii)
   Y < Q
   Y < P
   Z >= P
None follows
54) Option E E > F .... (i) F ≠ L .... (ii), L = N .... (iii)
   F > N not follows
   E > L follows
   E > N follows
55) Option A. H = J...(i), J < K... (ii), K > M....(iii)
   I. H >= M
   II. M > J
   III. H > K
None follows
56) Option E. M>= T... (i), T=V....(ii), V<E......(iii)
   I. V = M
   II. V < M
   III. E > T follows
   Either I or II and III follows
57) Option A. H>=J...(i), J < K... (ii), K > M....(iii)
   H>=K
   M>H
   H>K
None follows
58) Option A D=F, F≠M, M<K
   F < K
   D < K
   D =< M
None follows
59) Option C K > M, M<R, R = T
   K > T not follows
   T > M follows
   R > K not follows
60) Option C.T<M, M=<R, R = N
   M = N
   M <N
   R = T
Either I or II follows
61) Option D. B ≠ N, N = R, R > T
   B ≠ R
   T < N
   N > T
All follows
62) Option B. N = P, K > P, Q < K
   K > N follows
   Q > N not follows
   Q > P not follows
63) Option E.Z>= K....(i), K>T......(ii), T=F
    ....(iii)
   F < Z
   Z > T
   K > F
All follows
64) Option A. K > B ....(i),, B =< D .....(ii),
   D < K .... (iii)
   B ≠ K not follows
   B < K follows
   K > D not follows
65) Option A. N = R ....(i),, R =< M .....(ii),
    M >= J .... (iii)
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N = M
N < M
R > J
Either I or II follows

66) Option B. S >= T ....(i), T =< R.....(ii),
R < M .... (iii)
M > T follows
R > S not follows
M = T not follows

67) Option A. H <= V . ....(i), V = M .....(ii),
M > R .... (iii)
R > H
H > R
H > M
None follows

68) Option D. Z < N ....(i), F >= N ....(ii), F
=<= K ....(iii),
K > N not follows
K > Z follows
K >= N follows

69) Option C. D=T...(i), T>=M... (ii),
M<K....(iii)
M = D
D > M
K > T
Either I or II follows

70) Option E. W>=A..(i); B=<A... (ii);
B>M... (iii)
B < W
B = W
W > M
Either I or II and III follows

71) Option C. J=<M...(i); M=N... (ii);
N<T....(iii)
T > J follows
T = J not follows
T > M follows

72) Option D. V=<F...(i); F>R....(ii);
R>=G... (iii)
G < V

G > V
V > R
None follows.

73) Option A. M = K ...(i); K = D....(ii); D
<= P... (iii)
M=<=P
M=P
P>K
None follows

74) Option D. W>= T....(i); T>M....(ii);
B<M....(iii)
W > B
W > M
T > B
All follows

75) Option D. H = D ....(i); D < R ....(ii);
R >= N ...(iii)
N = H
N > H
H > R
None follows.

76) Option A. Z=<R..(i); R>=D.. (ii);
D<T..(iii)
D < Z
Z < T
R > T
None follows.

77) Option E. Q<P..(i); P=<F..(ii);
F=M... (iii)
M > P
M = P
M > Q
Either I or II and III follows.

78) Option D. E>J..(i); J<H... (ii);
H>=M... (iii)
E > M
J > M
E > H
None follows
79) Option B. \( R \geq P \) (i); \( P > M \) (ii); 
\( M = < D \) (iii)
- \( D > R \) not follows
- \( M > R \) follows
- \( D > P \) follows

80) Option C. \( F < K \) (i); \( K > D \) (ii);
\( N > D \) (iii)
- \( K < N \)
- \( F > D \)
- \( K = N \)
Either I or III follows.

81) Option B. \( H < J = N > R \)
\( R < J \) follows
\( H > J \) not follows
\( N > H \) follows

82) Option E. \( M > J > = T = N \)
\( N = < J \)
\( T < M \)
\( M > N \)
All follows

83) Option C. \( D = K = < F > P \)
\( P > D \) not follows
\( K = < P \) not follows
\( F > = D \) follows

84) Option A. \( K = < N > = T < J \)
\( J > N \)
\( K > T \)
\( T > K \)
None follows

85) Option D. \( M > D = V > = W \)
\( W > M \) not follows
\( M < V \) not follows
\( D > = W \) follows

86-90)
\( P \% Q \) means \( P \) is not smaller than \( Q \) -------- [ \( P > = Q \) ]
\( P \odot Q \) means \( P \) is not greater than \( Q \) -------- [ \( P = < Q \) ]
\( P \@ Q \) means \( P \) is neither greater than nor smaller than \( Q \) -------- [ \( P = Q \) ]

86) Option D. \( R = < K < M = J \)
\( J > K \)
\( M > R \)
\( R < J \)
All follows

87) Option C. \( Z = M > K < F \)
\( F > Z \) not follows
\( K < Z \) follows
\( F > M \) not follows

88) Option E. \( V > = H = F = < E \)
\( F = V \)
\( F < V \)
\( E > = H \)
Either I and II and II follows

89) Option A. \( W > T, N = < T, N = < D \)
\( D < T \)
\( W > N \)
\( D = T \)
None follows

90) Option C. \( Y = G > K < R \)
\( R > Y \) not follows
\( K < Y \) follows
\( R > G \) not follows

91-95)
\( 'A < B' \) means \( 'A > = B' \)
\( 'A \% B' \) means \( 'A = < B' \)
\( 'A @ B' \) means \( 'A > B' \)
\( 'A * B' \) means \( 'A = B' \)
\( 'A \# B' \) means \( 'A < B' \)

91) Option B. \( H < J, J = N, N > R \)
\( R < J \) follows
\( H > J \) not follows
\( N > H \) follows

92) Option E. \( M > J, J = T, T = N \)
93) Option C. \( D = K, K = F, F > P \)
\( P > D \) not follows
\( K = P \) not follows
\( F = D \) follows

94) Option D. \( K = N, N = T, T > J \)
\( J > N \)
\( K > T \)
\( T > K \)
None follows

95) Option C. \( B = K, K = L, L > P \)
\( P > B \) not follows
\( K = P \) not follows
\( L = B \) follows.

96) Option C. \( Q > L, L = B, B < G \)
\( D > B \) follows
\( B = D \) not follows
\( G < L \) not follows

97) Option E. \( Y < K, K = M, M > T \)
\( Z > Y \)
\( Y > T \)
\( Z < K \)
None follows

98) Option A. \( P < M, M = R, R = T, T < L \)
\( P < R \) follows
\( P = R \) not follows
\( M = L \) not follows

99) Option B. \( F > H, M = H, M = R, G = M \)
\( F = R \) not follows
\( F > R \) follows
\( H = G \) follows.

100) Option B. \( T > H, S = H, S = R, G = S \)
\( T = R \) not follows
\( T > R \) follows
\( H = G \) follows.

101) Option B. \( S >= V, V > M, V = F \)
111) Option D. U = F, F < W, W > K
   K < U
   K = U
   W >= U
   None follows

112) Option C. H >= D, D > B, B < W
   B < H follows
   W < H not follows
   D < W not follows

113) Option A. V < F, F =< P, P > J
   J < F
   P > V
   V > J
   None follows

114) Option C. Q < T, T < G, Q =< N
   Q < G follows
   N < T not follows
   N > G not follows

115) Option C. A < T, T =< C, C >= F
   A = T not follows
   A >= F not follows
   C > A follows

116) Option D. J > S =< R < U, N =< R =< E
   J > E follows
   S > E not follows
   U > S not follows

117) Option D. Q = N =< X =< Z, L > N
   L > Z not follows
   Q < L follows
   L > X follows

118) Option C. H < Q = T =< P, V > Q
   V > P follows
   H > V not follows
   V > H follows

119) Option D. J =< T < L = R, J =< C = Q < B
   B > = T not follows
   Q = < L not follows
   R > = Q follows

120) Option A. J =< K < L = N, J =< C = Q < B

N > C follows
K >= Q follows
J > B not follows

121) Option A. A >= N = S > J, P =< N
   A >= J not follows
   P > J follows
   N < J not follows

122) Option D. P > M =< F < R, H =< P
   H > F
   P > R
   F > P
   None follows

123) Option C. L >= M = Z, B =< I =< Z
   M > I not follows
   L > B follows
   Z > L not follows

124) Option C. D =< U =< Q, P > J =< D
   P > U follows
   J =< Q not follows
   Q > P not follows

125) Option B. E < X = S > O = Z
   X > Z follows
   Z < S follows
   Z > E not follows

126) Option A
127) Option B
128) Option D
129) Option D
130) Option B

131) Option C. Q > N =< R = B =< L < J
   J > R follows
   Q >= L not follows
   Q > B follows

132) Option C. U >= R = C, C =< N = M
   R > N not follows
   U > M follows
   R >= M not follows

133) Option C. D > R < Y, V > W =< K = Y
   W > D not follows
   V =< Y not follows
134) Option A. E > D = G => H => I = L
   L > D
   D = L
   E > I
   Either I or II follows

135) Option B. L=B=> Z< U <P= R
   L>=U follows
   Z<R follows
   B>R not follows

136) Option D. H >= P = R => V < G =>
   E > S
   H >= V follows
   R > E not follows
   G > P not follows

137) Option D. H >= P = R => V < G =>
   E > S
   Q > O = R >= N < F >=
   K > S
   F > O
   S < R
   Q > N
   None follows

138) Option A. A=Z=> D<V<M=<N
   M > Z not follows
   D < N follows
   A > V not follows

139) Option E. J<Y=<Y>U = W <L < Q
   =T
   Q > U
   W < S
   T > U
   All follows

140) Option E. K< X=<V>U = Z < L < P = R
   K < Z not follows
   R > U follows
   V > Z follows

141) Option C. Q > H = U => C = J < E
   Q > J follows
   E > H not follows
   H => J follows
\[ T = X \]
\[ T \geq Z \]

Either I or II follows.