Date : 2nd Dec 2023

Logical Reasoning - Inequality

English

Q:1 In the given statement, relationship between different elements is shown and it is followed by three conclusions. Choose the correct answer on the basis of information given below.
Statements: B > P = Q > Z < T > L > M ≥ N
Conclusions:
I. Q > T
II. M > N
III. M = N
1. Only conclusion I is true
2. Only conclusion II is true
3. Either conclusion II or III is true
4. Neither conclusion I nor II is true

Q:2 In the question given below are some statements followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance with 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 : Q > M ≤ N, Q = S > A < O
Conclusions :
I. N > A
II. M < S
1. Only conclusion I is true
2. Only conclusion II is true
3. Either conclusion I or II is true
4. Neither conclusion I nor II is true

Q:3 In these questions, the relationship between different elements is shown in the statement. The statement is followed by two conclusions. Choose the correct answer on the basis of the information given below.
Statements: I ≥ H > A , Q < A = P , H ≥ B , I ≤ G
Conclusions:
I) G = H
II) G > H
1. Both conclusions I and II follow
2. Either conclusion I or II follows
3. Only conclusion II follows
4. Neither conclusion I nor II follows
5. Only conclusion I follows

Q:4 Which of the symbols should be placed in the blank spaces in the given expression so as to make C ≤ F and A > D definitely true?
A _ B _ C _ D _ E _ F _ G
1. >, ≥, =, ≤, ≤, <
2. >, ≥, =, ≤, <, <
3. ≥, ≥, =, ≤, ≤, <
4. >, ≥, >, ≤, ≤, <
5. Only conclusion I follows

Q:5 Which of the following symbols should be placed in the blank spaces respectively (in the same order from left to right) in order to complete the given expression in such a manner that both 'F > N' as well as 'N ≤ B' definitely holds true?
B _ A _ N _ E _ F
1. >, >, ≥, <
2. ≥, ≥, ≥, ≤
3. ≥, =, ≤, <
4. >, ≥, <, =
5. Only conclusion I follows

Q:6 In the given question, two conclusions and three statements are given. You have to decide in which statement/statements, the given conclusions logically follow. Read the statements and conclusions carefully and answer the question.
Conclusions:
I. M > N
II. O ≤ P
Statements:
I. P ≥ Q ≥ R = S, S ≥ L = M ≥ O, G = M ≥ H > N
II. S > T ≤ U < O, T > O = L ≤ P, M > G = K < N
III. O = G = N ≤ S, P ≥ S = L > Q, M > S = W < T
1. Both statements I and II follow
2. Both statements II and III follow
3. Both statements I and III follow
4. All I, II and III follow
5. None follows

Q:7 Find the appropriate statement for the given conclusions:
Conclusion I: H > Y
Conclusion II: Y < K
1. H ≥ G > J < Y ≤ K
2. K > A ≤ U > H > Y
3. H ≥ A > Y < L = K

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4. H ≤ U ≥ Y = K ≤ T
5. None follows

Direction 8 - 10 : Study the following information carefully and answer the question given below.
'P % Q' means 'P is not smaller than Q.'
'P * Q' means 'P is neither greater than nor equal to Q.'
'P δ Q' means 'P is neither smaller than nor equal to Q.'
'P $ Q' means 'P is neither greater than nor smaller than Q.'
'P © Q' means 'P is not greater than Q.'
Q:8 Statements: H % F, F * W, W $ E
Conclusions :
I. E δ F
II. H δ W
1. If only conclusion I is true
2. If only conclusion II is true
3. If either conclusion I or II is true
4. If neither conclusion I nor II is true
5. If both conclusions I and II are true

Q:9 Statements: P * K, K $ N, N % R
Conclusions:
I. R $ K
II. R * K
1. If both conclusions I and II are true
2. If only conclusion I is true
3. If only conclusion II is true
4. If either conclusion I or II is true
5. If neither conclusion I nor II is true

Q:10 Statements: D $ T, T % M, M * J
Conclusions:
I. J δ D
II. M © D
1. If only conclusion I is true
2. If either conclusion I or II is true
3. If neither conclusion I nor II is true
4. If only conclusion II is true
5. If both conclusions I and II are true

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Answer Key

1. (3)	**2.** (2)	**3.** (2)	**4.** (1)	**5.** (3)
6. (3)	**7.** (3)	**8.** (1)	**9.** (4)	**10.** (4)

Answers and Solutions

Q:1 The correct answer is **Option 3** i.e. **Either conclusion II or III is true**
Given Statement: B > P = Q > Z < T > L > M ≥ N
Conclusion:
I. Q > T: **False** (Q > Z < T, as no definite relationship between the two, is given).
II. M > N: **False** (M ≥ N)
III. M = N: **False** (M ≥ N)
Conclusion II and III form complementary pairs, as on combining >, and = signs we get ≥)
Hence, the correct answer is **Either conclusion II or III is true.**

Q:2 The correct answer is **Option 2** i.e. **Only conclusion II is true**
Given Statements: Q > M ≤ N, Q = S > A < O
Combined Statement: O > A < S = Q > M ≤ N
Conclusions:
I. N > A: **False** (A < S = Q > M ≤ N, as no definite relationship between the two, can be determined).
II. M < S: **True** (S = Q > M → S > M)
Hence, the correct answer is **Only conclusion II is true.**

Q:3 The correct answer is **Option 2** i.e **Either conclusion I or II follows**

Statements: I ≥ H > A , Q < A = P , H ≥ B , I ≤ G
Conclusions:
I) G = H: **False** (G ≥ I ≥ H →G ≥ H)
II) G > H: **False** (G ≥ I ≥ H →G ≥ H)
Since both the conclusions are making a complementary pair, the answer will be either conclusion I or II follows.
Hence, the correct answer is **Either conclusion I or II follows.**

Q:4 The correct answer is **Option 1** i.e. **>, ≥, =, ≤, ≤, <**
From Option I:
A > B ≥ C = D ≤ E ≤ F < G
⇒ A > B ≥ C = D → A > D **True**
⇒ C = D ≤ E ≤ F → C ≤ F **True**
From Option II:
A > B ≥ C = D ≤ E < F < G
⇒ A > B ≥ C = D → A > D **True**
⇒ C = D ≤ E < F → C < F **False**
From Option III:
A ≥ B ≥ C = D ≤ E ≤ F < G
⇒ A ≥ B ≥ C = D → A ≥ D **False**
⇒ C = D ≤ E ≤ F → C ≤ F **True**
From Option IV:
A > B ≥ C > D ≤ E ≤ F < G
⇒ A > B ≥ C > D → A > D **True**
⇒ C > D ≤ E ≤ F i.e. opposite signs between C and F → C ≤ F **False**
Clearly, Option 1 follows both conditions.
Hence, the correct answer is **>, ≥, =, ≤, ≤, <.**

Q:5 The correct answer is **Option 3** i.e. **≥, =, ≤, <**
Given: B _ A _ N _ E _ F
Expressions that should be true: F > N and N ≤ B
Checking the options:
Option 1: B > A > N ≥ E < F → Neither F > N nor N ≤ B holds true.
Option 2: B ≥ A ≥ N ≥ E ≤ F → F > N does not hold true.
Option 3: B ≥ A = N ≤ E < F → Both F > N and N ≤ B hold true.
Option 4: B > A ≥ N < E = F → N ≤ B does not hold true.
Hence, the correct answer is **≥, =, ≤, <.**

Q:6 The correct answer is **Option 3** i.e. **Both Statements I and III follow**
From Statement I:
P ≥ Q ≥ R = S, S ≥ L = M ≥ O, G = M ≥ H > N
⇒ M ≥ H > N → M > N **Follows**
⇒ P ≥ Q ≥ R = S ≥ L = M ≥ O → O ≤ P **Follows**
From Statement II:
S > T ≤ U < O, T > O = L ≤ P, M > G = K < N
⇒ M > G = K < N i.e. opposite signs between M and N → M > N **Doesn't follow**
⇒ O = L ≤ P → O ≤ P **Follows**
From Statement III:
O = G = N ≤ S, P ≥ S = L > Q, M > S = W < T
⇒ M > S ≥ N → M > N **Follows**

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⇒ P ≥ S ≥ N = G = O → O ≤ P **Follows**
Clearly, Both Statements I and III follow the conclusions.
Hence, the correct answer is **Both Statements I and III follow.**

Q:7 The correct answer is **Option 3** i.e. **H ≥ A > Y < L = K**
Given conclusions:
I: H > Y
II: Y < K
Checking the options:
Option 1: H ≥ G > J < Y ≤ K → Neither H > Y nor Y < K follows
Option 2: K > A ≤ U > H > Y → Only H > Y follows
Option 3: H ≥ A > Y < L = K → Both H > Y and Y < K follow
Option 4: H ≤ U ≥ Y = K ≤ T → Neither H > Y nor Y < K follows
Therefore, the correct answer is **H ≥ A > Y < L = K.**

Q:8 The correct answer is **Option 1** i.e. **If only conclusion I is true**
As per the given information,
1. H % F means H ≥ F
2. F * W means F < W
3. W $ E means W = E
So, the final equation will be:
H ≥ F < W = E
Conclusion:
I. E δ F means E > F: **True** (As F < W = E → F < E)
II. H δ W means H > W: **False** (As H ≥ F < W: opposite signs are between the elements.)
Hence, the correct answer is **If only conclusion I is true.**

Q:9 The correct answer is **Option 4** i.e. **If either conclusion I or II is true**
As per the given information,
1. P * K means P < K
2. K $ N means K = N
3. N % R means N ≥ R
So, the final equation will be:
P < K = N ≥ R
Conclusions:
I. R $ K means R = K: **False** (K = N ≥ R → K ≥ R)
II. R * K means R < K: **False** (K = N ≥ R → K ≥ R)
Here, both conclusions form a complementary pair.
Hence, the correct answer is **If either conclusion I or II is true.**

Q:10 The correct answer is **Option 4** i.e. **If only conclusion II is true**
As per the given information,
1. D $ T means D = T
2. T % M means T ≥ M
3. M * J means M < J
So, the final equation will be:
D = T ≥ M < J
Conclusions:
I. J δ D means J > D: **False** (D = T ≥ M < J → opposite signs between the elements)
II. M © D means M ≤ D: **True** (D = T ≥ M → D ≥ M)
Hence, the correct answer is **If only conclusion II is true.**

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