Inequality (Symbols)

Solution

1. **Answer: (C)**
Given statement: R = Y = P > S ≥ H < F ≤ C = M
I. R > M → False (as R = Y = P > S ≥ H < F ≤ C = M)
II. H = M → False (as H < F ≤ C = M)
Thus, None follows is the correct answer.

2. **Answer: (D)**
Given statement: B = K ≥ H = T > U ≤ I
I. H > I → False (as H = T > U ≤ I)
II. H ≤ I → False (as H = T > U ≤ I)
Conclusion I and II is false and it makes complementary form for either or,
Thus, Either conclusion I or II follow.
Additional Information
Signs between H and I are the opposite, but all three signs are present between H and I, leading to false conclusion so Either or conclusion will be true.

3. **Answer: (A)**
Given statement: A > G < T < U ≤ W = P > Y
I. A < P → False (as A > G < T < U ≤ W = P > Y as, the signs are opposite so, definite relation between the A and P cannot be determined)
II. T < Y → False (as T < U ≤ W = P > Y as, the signs are opposite so, definite relation between the T and Y cannot be determined)
Thus, neither conclusion I nor II follows

4. **Answer: (B)**
Given **Statements:** D < E ≤ F, G > H ≥ I > F
On combining: D < E ≤ F < I ≤ H < G
Conclusions:
I. E ≤ H → False (as E ≤ F < I ≤ H → E < H)
II. H > D → True (as D < E ≤ F < I ≤ H → D < H)
Hence, only II is true.

5. **Answer: (D)**

Given **Statements:** M ≥ B ≥ N = Z > X ≤ R > S
Conclusions:
I. M > X → True (as M ≥ B ≥ N = Z > X → M > X)
II. N > S → False (as N = Z > X ≤ R > S → Relation between N and S cannot be determined)
Hence, only I is true.

6. **Answer: (D)**
Given **Statements:** M > N ≥ O = P ≤ Q < R > S
Conclusion:
I. M > P → True (as M > N ≥ O = P → M > P)
II. O < R → True (as O = P ≤ Q < R → O < R)
Hence, both I and II are true.

7. **Answer: (B)**
Given **Statement: X** > Z < Y ≤ V; P > K > S = Q ≥ V
On Combining: P > K > S = Q ≥ V ≥ Y > Z < X
Conclusion:
I) K > X → False (As K > S = Q ≥ V ≥ Y > Z < X → so, no direct relation between **K** and **X** can be determined)
II) Y < P → True (As P > K > S = Q ≥ V ≥ Y → so P > Y)
Hence, **Only II is true**.

8. **Answer: (D)**
Given statements: U ≤ W ≥ R > S ; T > S = V
on combining : U ≤ W ≥ R > S = V < T
Conclusions:
I. W < V → False (as W ≥ R > S = V) it is clear that W is greater than V
II. T < V → False (as S = V < T)   V is shorter than T

none of the conclusion follows therefore **Neither I nor II is true**
Confusion Points
both statements not follow the given statement as per statement W ≥ R > S = V it is clear W > V while in conclusion it is given
W < V so it is false .
similarly S = V < T → V < T but in conclusion it is T < V so it is false
therefore **None is true.**

9. **Answer: (B)**
Given statements: P ≥ Q = R ≥ N < S
Conclusions:
I) S > Q → False (as Q = R ≥ N < S → relation between S and Q cannot be determined)
II) P ≥ N → True (as P ≥ Q = R ≥ N → P ≥ N)
Hence, **Only conclusion II follows.**

10. **Answer: (B)**
Given statements: F = L; K < L; K ≥ D; M < D
On combining: F = L > K ≥ D > M
Conclusions:
I. F ≥ M → False (as F = L > K ≥ D > M → F > M)
II. L > D → True (as L > K ≥ D → L > D)
Hence, only II is True.

11. **Answer: (E)**
Given statements: H = G > F; A < B ≥ X; B ≤ F
On combining: H = G > F ≥ B > A; H = G > F ≥ B ≥ X
Conclusions:
I. H ≥ A → False (as H = G > F ≥ B > A → H > A)
II. X < F → False (as F ≥ B ≥ X → F ≥ X)
Hence, neither I nor II is True.

12. **Answer: (C)**
Given statements: A > B ≥ C; E = D ≤ C
On combining: A > B ≥ C ≥ D = E
Conclusions:
I. B ≥ D → True (as B ≥ C ≥ D → B ≥ D)

II. A > E → True (as A > B ≥ C ≥ D = E → A > E)
Therefore, both conclusion I and II are True.

13. **Answer: (C)**
Given statements: Q ≤ A < D < K ≤ M = J = F > Z
Conclusions:
I. K > Q → True (as **Q ≤ A < D < K** ≤ M = J = F > Z → K > Q)
II. F ≥ K → True (as Q ≤ A < D < **K ≤ M = J = F** > Z → F ≥ K)
Therefore, both I and II are true.

14. **Answer: (E)**
Given statements: P = Q ≤ R; T = P; T > S
On combining: S < P = Q = T ≤ R
I. Q < S → False (as S < P = Q)
II. R < S → False (as S < T ≤ R)
Therefore none follows.

15. **Answer: (C)**
Given statements: C > W; G < N; W = T; N ≤ T
On combining: C > W = T ≥ N > G
Conclusions:
I. C > G → True (as C > W = T ≥ N > G → C > G)
II. W ≥ N → True (as W = T ≥ N → W ≥ N)
Hence, both I and II is True.

16. **Answer: (A)**
Given statement: A < B ≥ C; D > E > A; C = F > G
On combining: D > E > A < B ≥ C = F > G
Conclusion:
I. D ≥ C → False (as D > E → E > A → A < B → B ≥ C) thus clear relation between D and C cannot be determined, It has no common sign between them.
II. B > G → True (as B ≥ C → C = F → F > G → B > G)
Therefore, only conclusion **II** is true.

17. **Answer: (B)**
Given Statements: A > B = C, D < M, M ≤ C
On combining: A > B = C ≥ M > D
Conclusions: I. B > M → False (as B = C ≥ M → B ≥ M)

II. D < A → True (as A > B = C ≥ M > D →
A > D)
Hence, only II is true.

18.   Answer: (D)
Given statements: Y = O ≤ G ≤ K = U > L >
P; Y = A ≥ R
On combining: R ≤ A = Y = O ≤ G ≤ K = U
> L > P
Conclusions:
I. U > R → False (as R ≤ A = Y = O ≤ G ≤
K = U → U ≥ R)
II. R = U → False (as R ≤ A = Y = O ≤ G ≤
K = U → U ≥ R)
Therefore, conclusion I and II forms a
complementary pair.
Hence, Either I or II is True.

19.   Answer: (C)
Given statement: L > B < J ≤ Q; T = O < L;
P = Q

On combining: T = O < L > B < J ≤ Q = P
Conclusion:
I. T < L → True (as T = O → O < L → T <
L)
II. P ≥ J → True (as J ≤ Q → Q = P → P ≥
J)
Therefore,   both   conclusions **I** and **II** are
true.

20.   Answer: (B)
Given statements: R ≤ P ≤ Q; R ≥ S > T ≤ M
= U
On combining: Q ≥ P ≥ R ≥ S > T ≤ M = U
Conclusions:
I. Q > T → True (as Q ≥ P ≥ R ≥ S > T → Q
> T)
II. R ≥ M → False (as R ≥ S > T ≤ M →
clear relation between R and M cannot be
determined)
Hence, Only I is True.