

## Logical Deduction

As the name itself suggests, logical deduction questions require logical thinking. Every question starts off with a premise which might be of any one of the following types:

### 🕒 LOGICAL DEDUCTIONS PREMISES— VARIOUS PATTERNS

#### Type 1: If A Happens B Happens

This means that A leads to B, but does not mean the reverse, i.e., if B has happened, A must have happened. In such situations, A is a sufficient condition for B, but is not a necessary condition.

Let's look at the following example:

🌀 If I go to a movie, I enjoy myself.

🌀 This would mean, that if I have gone to the movie, I will definitely enjoy myself. However, it does not mean that if I have enjoyed myself, I must have gone to the movie—there are so many ways of enjoying yourself.

Another example of this type would be:

🌀 If Amitabh acts in a movie, he will earn money.

🌀 This does not mean that if he has earned money, he must have acted in the movie.

#### Type 2: Only If A Happens B Happens

In this case, A is a necessary and sufficient condition for the occurrence of B. In this case, there is reversibility of the logic, i.e., if B has happened, A must have happened.


🌀 Only if Saurav plays the match, will he get a hundred.

🌀 If Saurav has got a hundred, he must have played the match.

#### Type 3: If A Happens B does not Happen


In this case, if A has happened, B does not happen. The opposite is also true, i.e., if B has happened,

A must not have happened.

 If Martina plays well, Sania will not win.


#### **Type 4: If A does not Happen B will Happen**

Again in this case, the reverse might not be true.


 If Anand does not come, Kasparov will. This does not mean that if Kasparov comes, Anand will not come.

#### **Type 5: Either A or B will Happen**

One of the two has to happen. At the same time, the two events are exclusive of one another. If one happens, the other will not happen.

 Either he becomes a TV star or he becomes a movie star.

Let us look at a few solved examples:

 1. Shahrukh either acts as a villain, or he acts as a hero.


- A. Shahrukh acts like a hero.
- B. Shahrukh does not act like a villain.
- C. Shahrukh acts like a villain.
- D. Shahrukh does not act like a hero.

(a) CD only

(b) BA only

(c) CD & BA

(d) None of these

 This question is based on an EITHER-OR Premise. Thus, we can see that CD is correct. Since, he acts like a villain—(Statement C) he will not act like a hero (Statement D). Similarly, BA can also be seen to be true. Hence option (c) is correct.

 2. Whenever Martin goes to a movie, he has nightmares.


- A. Martin did not have nightmares.
- B. Martin went to a movie.
- C. Martin had nightmares.
- D. Martin did not go to the movie.

(a) AD

(b) DC

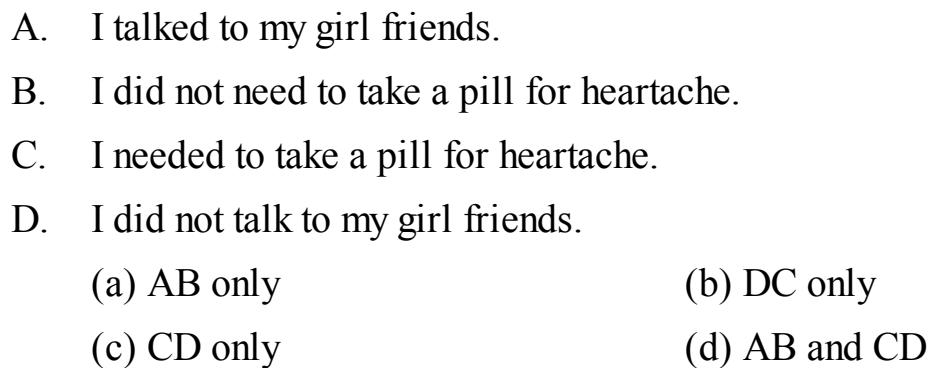
(c) CB

(d) DA

 When A happens, B happens. However, if A does not happen, it is not necessary that B will not happen. Also, if B has happened, it is not necessary that A must have happened. However, if B has not happened, it is necessary that A must not have happened.

Thus, AD is the only correct sequence.

3. If I talk to my girl friends, then I do not need to take a pill for heartache.



AB and CD are both logically correct.

**Directions for Questions 1 to 30:** Each question has a main statement, followed by four statements labelled A, B, C, and D. Choose the ordered pair of statements, where the first statement implies the second, and the two statements are logically consistent with the main statement.

- (A) I got a chocolate.
- (B) I didn't get a chocolate.
- (C) I didn't visit the restaurant.
- (D) I visited the restaurant.
- (a) I (b) BD
- (c) DA (d) AC

- (A) I got a flower.
- (B) I felt loved.
- (C) I didn't get a flower.
- (D) I didn't feel loved.
- (a) BA (b) BC
- (c) CD (d) DC

- (A) I played.
- (B) I didn't play.
- (C) I wore a cap.

(D) I didn't wear a cap.

(a) BD

(b) CA

(c) DB

(d) AD

4. I feel happy every time I see an innovation.

(A) I didn't see an innovation.

(B) I saw an innovation.

(C) I felt happy.

(D) I didn't feel happy.

(a) BC

(b) AD

(c) CB

(d) CD

5. If you once visit the USA, you become addicted to its openness.

(A) I visited the USA.

(B) I didn't get addicted to the USA's openness.

(C) I got addicted to the USA's openness.

(D) I didn't visit the USA.

(a) BD

(b) DB

(c) CA

(d) AB

6. Whenever the villain makes an entry, the viewers boo.

(A) The villain made an entry.

(B) The viewers didn't boo.

(C) The villain didn't make an entry.

(D) The viewers booed.

(a) BC

(b) CB

(c) DA

(d) None of these

7. I get cold feet whenever I see an examination paper.

(A) I saw an examination paper.

(B) I didn't see an examination paper.

(C) I got cold feet.

(D) I didn't get cold feet.

(a) CA

(b) BD

(c) DB

(d) BC

8. I remember her every time I see her photograph.

(A) I remembered her.  
(B) I saw her photograph.

(C) I didn't see her photograph.

(D) I didn't remember her.

(a) CD

(b) DC

(c) AB

(d) None of these

9. Whenever Devdas comes, Paro sings.

(A) Paro is singing.

(B) Devdas has come.

(C) Devdas hasn't come.

(D) Paro is not singing.

(a) AB

(b) BA

(c) BC

(d) CD

10. Every player will become a champ.

(A) Rajesh is a player.

(B) Rajesh will become a champ.

(C) Rajesh is not a player.

(D) Rajesh will not become a champ.

(a) AD

(b) DA

(c) CD

(d) DC

11. You can see the star only if you go to the cinema.

(A) I went to the cinema.

(B) I didn't see the star.

(C) I saw the star.

(D) I didn't go to the cinema.

(a) BD

(b) DB

(c) AB

(d) CD

12. You can find Chinese toys only in China.

(A) I didn't find Chinese toys.

(B) I found Chinese toys.

(C) I went to the fair.

(D) I didn't go to China.

(a) CD

(b) CB

(c) CA

(d) AD

13. I will marry Vandana only if she wears my ring.

(A) I married Vandana.

(B) Vandana wore my ring.

(C) I could not marry Vandana.

(D) Vandana didn't wear my ring.

(a) BA

(b) BC

(c) DC

(d) CD

14. Only in Africa, can you see the African elephant.

(A) You went to Africa.

(B) You didn't go to Africa.

(C) You saw the African elephant

(D) You didn't see the African elephant.

(a) AC

(b) DB

(c) AD

(d) BD

15. You cannot clear the CAT unless you are intelligent.

(A) You are intelligent.

(B) You can clear the CAT.

(C) You are not intelligent.

(D) You cannot clear the CAT.

(a) BD

(b) AC

(c) CD

(d) AB

16. Martina wins the tournament provided she plays the final.

(A) Martina played the final.

(B) Martina won the tournament.

(C) Martina did not win the tournament.

(D) Martina did not play the final.

(a) AB

(b) BA

(c) CD

(d) AC

17. You can drive over 100 kmph only on the freeway.

(A) You are on the freeway.

(B) You cannot drive over 100 kmph.

(C) You can drive over 100 kmph.

(D) You are not on the freeway.

(a) DB

(b) AC

(c) BD

(d) AB

18. The exam is either CAT or XAT.

(A) The exam is CAT.

(B) The exam is not CAT.

(C) The exam is XAT.

(D) The exam is not XAT.

(a) AB

(b) CD

(c) BA

(d) BC

19. Mr. Condoleeni is either an engineer or a doctor.

(A) Mr. Condoleeni is an engineer.

(B) Mr. Condoleeni is not a doctor.

(C) Mr. Condoleeni is not an engineer.

(D) Mr. Condoleeni is a doctor.

(a) AB

(b) AD

(c) DA

(d) BC

20. Every inhabitant of the planet is either male or female. Given M is an inhabitant of the planet.

(A) M is male.

(B) M is female.

(C) M is not male

(D) M is not female.

(a) AB

(b) CD

(c) AC

(d) BC

21. Either Shravan is sick; or he is stoned.

(A) Shravan is sick.

(B) Shravan is not sick.

(C) Shravan is stoned.

(D) Shravan is not stoned.

(a) AB

(b) DA

(c) AC

(d) CD

22. Whenever Shyam hears of an exam, he loses sleep.

(A) Shyam heard of an exam.

(B) Shyam did not hear of the exam

(C) Shyam lost sleep.

(D) Shyam did not lose sleep.

(a) CA

(b) BD

(c) DB

(d) AD

23. Either the bus is late; or it has turned turtle.

(A) The bus is late.

(B) The bus is not late.

(C) The bus has turned turtle.

(D) The bus has not turned turtle.

(a) AB

(b) DB

(c) CA

(d) BC

24. When I see a horror movie I have a bad dream.

(A) I saw a horror movie.

(B) I did not see a horror movie.

(C) I did not have a bad dream.

(D) I had a bad dream.

(a) CB

(b) AD

(c) BC

(d) AC

25. Either Veronica is indisposed or she is sad.

(A) Veronica is not indisposed.

(B) Veronica is not sad.

(C) Veronica is indisposed.

(D) Veronica is sad.

(a) AB

(b) AD

(c) BA

(d) DA

26. Ravan gets a mild flu whenever he eats ice creams.

(A) Ravan gets a mild flu.

(B) Ravan does not eat ice creams.

(C) Ravan does not get a mild flu.

(D) Ravan eats ice creams.



- (a) AB (b) DC  
(c) AC (d) BC
27. Either they have no confidence in the management or they are irritable.  
(A) They are irritable.  
(B) They are not irritable.  
(C) They have confidence in the management.  
(D) They have no confidence in the management.  
(a) BA (b) CB  
(c) DA (d) BD
28. Whenever Vijay reads late into the night, his grandfather reprimands him.  
(A) His grandfather does not reprimand Vijay.  
(B) Vijay reads late into the night.  
(C) Vijay reads early in the morning.  
(D) Vijay's grandfather reprimands him in the morning.  
(a) CD (b) BD  
(c) AB (d) None of the above
29. All irresponsible bosses shout if their workers do not fall in line.  
(A) All irresponsible bosses do not shout.  
(B) Workers fall in line.  
(C) Workers do not fall in line.  
(D) All irresponsible bosses shout.  
(a) AB (b) BA  
(c) CA (d) All of the above
30. Either Aamir is angry, or he shows mock anger.  
(A) Aamir shows mock anger.  
(B) Aamir is angry.  
(C) Aamir does not show mock anger.  
(D) Aamir is not angry.  
(a) CB only (b) DA only  
(c) BA only (d) CB and DA

1. (c)	2. (d)	3. (c)	4. (a)
5. (a)	6. (a)	7. (c)	8. (b)
9. (b)	10. (d)	11. (b)	12. (d)
13. (c)	14. (d)	15. (c)	16. (b)
17. (a)	18. (d)	19. (a)	20. (d)
21. (a)	22. (a)	23. (d)	24. (a)
25. (b)	26. (d)	27. (b)	28. (d)
29. (a)	30. (d)		

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