MBA Fastrack 2025

Data Interpretation & Logical Reasoning

DPP: 3

Games & Tournaments 1

Directions (1-5) Read the following passage and answer the given questions.
Two players, Aryan and Vihaan, are playing a game involving removing coins from a box. The rules are as follows:

1. Each player, on their turn, must remove a minimum of 1 coin and a maximum of 6 coins.
2. The game continues until all the coins are removed from the box.
3. Both Aryan and Vihaan play strategically to win the game.
4. The player who removes the last coin loses the game.

Q1 If there are 18 coins in the box and it is Vihaan's turn to play, how many coins should he remove to ensure he wins the game no matter how Aryan plays?
(A) 2 (B) 6
(C) 3 (D) 5

Q2 If there are 20 coins in the box and it is Aryan's turn to play, how many coins must he remove to win the game no matter what Vihaan does?
(A) 2
(B) 5
(C) 4
(D) Aryan cannot win the game.

Q3 How many coins should Vihaan remove if there are 31 coins in the box so that he wins the game no matter how Aryan plays?
(A) 1 (B) 6
(C) 3 (D) 2

Q4 If Aryan can guarantee a win by removing 4 coins, what could be the total number of coins initially in the box?
(A) 28 (B) 30
(C) 25 (D) 40

Q5 If there are 36 coins in the box, Vihaan is the first person to remove the coin. How many coins should Vihaan remove on the first turn to ensure his win?
(A) 1
(B) 5
(C) 3
(D) Vihaan cannot win the game.

Directions (6-10) Read the following passage and answer the given questions.
Two players, Ravi and Kiran, are playing a game involving removing sticks from a pile. The rules are as follows:

- Each player, on their turn, must remove a minimum of 1 stick and a maximum of 6 sticks.
- The game continues until all the sticks are removed from the pile.
- Both players play strategically to win the game.
- The player who picks up the last stick wins the game.

Q6 If there are 22 sticks in the pile and it is Ravi's turn to play, how many sticks should he remove to guarantee his win no matter how Kiran plays?
(A) 2 (B) 3
(C) 1 (D) None of these

Q7 If the number of sticks to be removed by Kiran in her turn to ensure victory is 4, which of the following could be the total number of sticks initially in the pile?

(A) 32
(B) 28
(C) 25
(D) More than one of the above

Q8 If there are 18 sticks in the pile and it is Kiran's turn, how many sticks should she remove to ensure Ravi loses the game?
(A) 2 (B) 4
(C) 1 (D) 3

Q9 How many sticks should Ravi remove to guarantee a win if there are 45 sticks in the pile at the start of his turn?
(A) 5 (B) 3
(C) 2 (D) 4

Q10 If Kiran can ensure a win by picking up 3 sticks, which of the following could be the total number of sticks remaining in the pile?
(A) 31 (B) 29
(C) 30 (D) 28

Directions (11-15) Read the following passage and answer the given questions.
128 players participated in a knockout tennis tournament. The players are ranked from 1 to 128 with rank 1 being the top ranker and rank 128 being the last ranked player. In each round, the winner of a match between two players advances to the next round while the loser is eliminated. This process is repeated till the final round. In the first round, the player ranked 1 plays the player ranked 128, the player ranked 2 plays the player ranked 127 and so on. An upset is said to happen if a lower-ranked player beats a higher-ranked player. The matches are scheduled in such a way that, in case of no upsets, in each round, the highest-ranked player plays the lowest-ranked player left in the tournament, the second-highest-ranked player plays the second-lowest-ranked player left and so on.

Q11 After which round do a prime number of players advance to the next round?
(A) Round 3 (B) Round 4
(C) Round 6 (D) Round 7

Q12 If the tournament had no upsets, in which round was the player ranked 45 eliminated?
(A) Round 1 (B) Round 2
(C) Round 3 (D) Round 4

Q13 How many matches did the player who lost in the semi-finals win in the tournament?
(A) 2 (B) 3
(C) 4 (D) 5

Q14 Which player faced the player ranked 4 in the quarter-finals if the tournament had no upsets?
(A) Rank 5 (B) Rank 6
(C) Rank 7 (D) Rank 8

Q15 At most how many matches did a player who lost to the 8th ranked player win, if no upsets were recorded in the tournament?
(A) 1 (B) 2
(C) 3 (D) 4

Directions (16-20) Read the following passage and answer the given questions.
64 students participate in a Chess tournament. The student is seeded from 1 to 64, 1 being the best seeded or highest seeded student and 64 being the lowest seeded student. Each round of the tournament follows a knockout format, with winner promoted to the next round and the loser being eliminated from the tournament. In the first round, seed 1 student plays with seed 64, seed 2 plays with seed 63 and so on. An upset is set to happen when a lower seeded Student beats a higher seeded Student. When an upset happens, the lower seeded student retained his seeding but replaces the higher seeded student in the schedule. The matches are scheduled in such a way that, in case of no upsets, in each round, the highest-ranked Student plays with the lowest-ranked Student left in the tournament, the second-highest ranked Student plays with

the second-lowest-ranked Student left and so on.

Q16 How many rounds were there in the entire tournament?
(A) 5 (B) 6
(C) 7 (D) 8

Q17 How many matches played in the match?
(A) 32 (B) 64
(C) 63 (D) 31

Q18 Is it possible for a student seeded 9 to won the tournament if there are only 2 upsets in the whole tournament?
(A) Yes
(B) No
(C) Can't be determined
(D) None of these

Q19 Which of the following seeded student will never play with seed 7 if there is no upset in the tournament?
(A) 26 (B) 58
(C) 10 (D) 3

Q20 If the student seeded 13 won the tournament, then at least how many upsets will take place?
(A) 2 (B) 3
(C) 4 (D) 5

Directions (21-25) Read the following passage and answer the given questions.

16 Top Indian wrestlers participate in the Indian Wrestling Championship (IWC) for men. These 16 wrestlers are marked from seed 1 to seed 16. Seed 1 considered as higher seed while seed 16 considered as lowest seed. This tournament happens on knock out bases which means if a player loses any match, then he will be eliminated from the games immediately. This tournament happens in such a way that higher seeded player plays with the lowest seeded player if there is no upsets. For example – In round 1, match 1 played between seed 1 and seed 16, match 2 played between seed 2 and seed 15 and so on. In round 2, match 1 played between winner of match 1 and match 8 of previous round and so on. When an upset happens, the lower seeded wrestler retained his seeding but replaces the higher seeded wrestler in the schedule. The following table represent the list of players with their seed number:

1	A	9	I
2	B	10	J
3	C	11	K
4	D	12	L
5	E	13	M
6	F	14	N
7	G	15	O
8	H	16	P

Q21 How many matches played in all rounds together?
(A) 14 (B) 15
(C) 16 (D) 13

Q22 If C and G lost in the first round then who can play against A in the semi-final if it is given that A reached semi-final?
(A) D (B) N
(C) F (D) J

Q23 If match 4 in round 1 and Match 3 in round 2 become an upset then who will the one who can play against A in semi-final if it is given that A reached in the semi-final.
(A) M
(B) E
(C) F
(D) Both a and b are possible

Q24 If the top 8 seeded players reach the quarter-final (Round 2) then who will not surely play against A in the final if it is given that A reached the final?
(A) B (B) G
(C) C (D) E

Q25 If seed 7 won the tournament, then which of the following can be the first upset caused by him?

(A) Seed 1 (B) Seed 2

(C) Seed 3 (D) Seed 4

Directions (26-30) Read the following passage and answer the given questions.

In a knockout badminton tournament with five rounds, no match ended in a tie. Each round consisted of one-on-one matches where the winner advanced, and the loser was eliminated. Some players received byes in the first round. Player rankings were assigned numerically, with Rank 1 being the best player, Rank 2 being the second-best, and so on.

Round 1:

- The top 5 ranked players (Ranks 1 to 5) received byes and directly advanced to Round 2.
- The remaining players competed as follows:
  - Rank 6 played against the last-ranked player.
  - Rank 7 played against the second-last-ranked player.
  - This pairing continued until Rank 16 played against Rank 17 in the last match.

Round 2:

- Matches were structured like this:
  - Match 1: Rank 1 vs Winner of the last match from Round 1
  - Match 2: Rank 2 vs Winner of the second-last match from Round 1
  - The same pattern continued with Match 6: Winner of Match 1 from Round 1 vs Winner of Match 6 from Round 1 and so on.

Round 3 and Beyond:

- Match 1: Winner of Match 1 (Previous Round) vs Winner of Last Match (Previous Round)
- Match 2: Winner of Match 2 (Previous Round) vs Winner of Second last Match (Previous Round 2)
- This continued until a champion was declared after the final match of the upcoming rounds.

Additional Details:

- An "upset" is called when a lower-ranked player defeats a higher-ranked player.
- Player rankings remained unchanged, regardless of upsets.

Q26 How many matches were played in the tournament?

(A) 30

(B) 27

(C) 26

(D) Can not be determined

Q27 What is the minimum number of matches a player must win to become the tournament champion?

(A) 5

(B) 4

(C) Either 5 or 4

(D) Can not be determined

Q28 What is the term used when a player ranked 10 defeats a player ranked 7?

(A) Regular Win (B) Bye

(C) Upset (D) Tie

Q29 What is the minimum number of upsets required for a player ranked 5 to win the tournament?

Q30 If Match 5 of Round 2 was the first upset of the tournament, which of the following scenarios could have taken place?

(A) The player ranked 21 can become the tournament champion.

(B) The player ranked 12 could have faced the player ranked 4 in Round 3.

(C) Both option A and B

(D) None of the above

Answer Key

Q1	(C)
Q2	(B)
Q3	(D)
Q4	(D)
Q5	(D)
Q6	(C)
Q7	(D)
Q8	(B)
Q9	(B)
Q10	(D)
Q11	(C)
Q12	(B)
Q13	(D)
Q14	(A)
Q15	(C)
Q16	(B)
Q17	(C)
Q18	(B)
Q19	(D)
Q20	(C)
Q21	(B)
Q22	(A)
Q23	(D)
Q24	(D)
Q25	(B)
Q26	(C)
Q27	(B)
Q28	(C)
Q29	3
Q30	(B)

Hints & Solutions

Note: scan the QR code to watch video solution

Q1. Text Solution:

Let's take out a few number games:

Assume 'X' is the first and 'Y' is the second person to pick the coin.

The below table shows the win and loss for each of X and Y.

Coins	Picked by		Won by
	X	Y	
1	1	-	Y
2	1	1	X
3	2	1	X
4	3	1	X
5	4	1	X
6	5	1	X
7	6	1	X

In the same way, if the total number of coins = 8

For the first turn, the number of coins picked by:

If X = 1, then the coin remained = 8 – 1 = 7.

Then Y must pick (as playing strategically) 6 coins so that only 1 remaining coin must be picked by X.

Hence, Y will win and X will lose.

In another way,

- If X = 2, then the coin remained = 8 – 2 = 6.

Then Y must pick (as playing strategically) 5 coins so that only 1 remaining coin must be picked by X.

Hence, Y will win and X will lose.

- If X = 3, then the coin remained = 8 – 3 = 5.

Then Y must pick (as playing strategically) 4 coins so that only 1 remaining coin must be picked by X.

Hence, Y will win and X will lose.

- If X = 4, then the coin remained = 8 – 4 = 4.

Then Y must pick (as playing strategically) 3 coins so that only 1 remaining coin must be picked by X.

Hence, Y will win and X will lose.

- If X = 5, then the coin remained = 8 – 5 = 3.

Then Y must pick (as playing strategically) 2 coins so that only 1 remaining coin must be picked by X.

Hence, Y will win and X will lose.

- If X = 6, then the coin remained = 8 – 6 = 2.

Then Y must pick (as playing strategically) 1 coin so that only 1 remaining coin must be picked by X.

Hence, Y will win and X will lose.

Coins	Picked by		Won by
	X	Y	
8	1 to 6	6 to 1	Y

And so on...for each number of coins (subject to X being the first one to pick), the below table shows the win:

Coins	Won by
9	X
10	X
11	X
12	X
13	X
14	X
15	Y

When such scenarios (Picking a coin) come, the number of coins decides the result of the match.

Points to win-

1. The number of coins left is more important than picking.
2. To ensure one's win the person must play as per the rule of CF (controlling factor).

Where,

CF = Min coin + Max coin

Here, CF = 1 + 6 = 7 no's

As the number of coins to leave is important, the person will play strategically to win by ensuring the coin to pick must be 7 by both participants in each turn.
Let's consider the 't' as the number of turns for maintaining the stance of strategically to win.
So, the number to control the game = 7t [where 't' is a positive integer]
As per the given condition, the person who picks up the last coin loses the game.
So, to ensure a win one must leave the minimum (one) coin apart from the 7t number of coins;
Therefore, the person has to leave = (7t + 1) number of coins after picking.
Note: Here 't' is not of much importance.

To win, Vihaan must leave (7t + 1) the number of coins after picking the required number.
For (7t + 1) = 15 is the number below 18:
Hence, the required number of coins = 18 – 15 = 3 coins.

Video Solution:

Q2. Text Solution:

To win, Aryan must leave (7t + 1) the number of coins after picking the required number.
For (7t + 1) = 15 is the number below 20:
Hence, the required number of coins = 20 – 15 = 5 coins.

Video Solution:

Q3. Text Solution:

To win, Vihaan must leave (7t + 1) the number of coins after picking the required number.
For (7t + 1) = 29 is the number below 31:
Hence, the required number of coins = 31 – 29 = 2 coins.

Video Solution:

Q4. Text Solution:

If Aryan can guarantee a win by removing 4 coins, he has to leave with (7t+1) number of coins after picking 4 coins.
So, initially the total number of coins = (7t+1) + 4 = 7t + 5
From the given options 40 (option D) is in (7t + 5) form.

Video Solution:

Q5. Text Solution:

To win, Vihaan must leave (7t + 1) the number of coins after picking the required number.
But 36 is in the form of (7t+1).
Hence, Vihaan cannot win the game.

Video Solution:

Q6. Text Solution:

Let's take out a few number games:

Assume 'X' is the first and 'Y' is the second person to pick the stick.
The below table shows the win and loss for each of X and Y.

Sticks	Picked by		Won by
	X	Y	
1	1	-	X
2	2	-	X
3	3	-	X
4	4	-	X
5	5	-	X
6	6	-	X

In the same way, if the total number of sticks = 7
For the first turn, the number of sticks picked by:
If X = 1, then the stick remained = 7 – 1 = 6.
Then Y must pick (as playing strategically) all remaining 6 sticks.
So that, Y will win and X will lose.
In another way,

- If X = 2, then the stick remained = 7 – 2 = 5.

Then Y must pick (as playing strategically) all remaining 5 sticks.
So that, Y will win and X will lose.

- If X = 3, then the stick remained = 7 – 3 = 4.

Then Y must pick (as playing strategically) all remaining 4 sticks.
So that, Y will win and X will lose.

- If X = 4, then the stick remained = 7 – 4 = 3.

Then Y must pick (as playing strategically) all remaining 3 sticks.
So that, Y will win and X will lose.

- If X = 5, then the stick remained = 7 – 5 = 2.

Then Y must pick (as playing strategically) all remaining 2 sticks.
So that, Y will win and X will lose.

- If X = 6, then the stick remained = 7 – 6 = 1.

Then Y must pick (as playing strategically) the remaining 1 stick.
So that, Y will win and X will lose.

Sticks	Picked by		Won by
	X	Y	
7	1 to 6	6 to 1	Y

And so on…
for each number of sticks (subject to X being the first one to pick), the below table shows the win:

Sticks	Won by
8	X
9	X
10	X
11	X
12	X
13	X
14	Y
15	X

When such scenarios (Picking a stick) come, the number of sticks decides the result of the match.
Points to win-

1. The number of sticks left is more important than picking.
2. To ensure one's win the person must play as per the rule of CF (controlling factor).

Where,
CF = Min stick + Max stick
Here, CF = 1 + 6 = 7 no's
As the number of sticks to leave is important, the person will play strategically to win by ensuring the stick to pick must be a total of 7 by both participants in each turn.
Let's consider the 't' as the number of turns for maintaining the stance of strategically to win.
So, the number to control the game = 7t [where 't' is a positive integer]
As per the given condition, the person who picks up the last stick wins the game.
So, to ensure a win one must leave 7t number of sticks;
Therefore, the person has to leave = (7t) number of sticks after picking.

Note: Here 't' is not of much importance.

To win, Ravi must leave (7t) the number of sticks after picking the required number.
For (7t) = 21 is the number below 22:
Hence, the required number of sticks = 22 – 21 = 1 stick.

Video Solution:

Q7. Text Solution:

To win, Ravi must leave (7t) the number of coins after picking the 4 sticks.
Hence, the total number of sticks = (7t + 4)
From the given options both 32 and 25 are in the form of (7t + 4)
Hence, option D is the correct answer.

Video Solution:

Q8. Text Solution:

To win, Kiran must leave (7t) the number of coins after picking the required number.
For (7t) = 14 is the number below 18:
Hence, the required number of coins = 18 – 14 = 4 sticks.

Video Solution:

Q9. Text Solution:

To win, Ravi must leave (7t) the number of coins after picking the required number.
For (7t) = 42 is the number below 45:
Hence, the required number of coins = 45 – 42 = 3 sticks.

Video Solution:

Q10. Text Solution:

To win, Kiran must leave (7t) the number of coins after picking the 3 sticks.
From the given options only 28 is in the form of (7t)
Hence, the total number of sticks remaining in the pile = 28
Hence, option D is the correct answer.

Video Solution:

Q11. Text Solution:

Total number of rounds = 7
128 players will play in the first round, 64 players in the second round, 32 in the third round, 16 in the fourth round, 8 in the fifth(quarter-final) round, 4 in the sixth round(semi-final), and 2 in the seventh(final) round. So, after the sixth round, a prime number of players will advance to the next round.
Answer is round 6, option c.

Video Solution:

Q12. Text Solution:

Total number of rounds = 7

128 players will play in the first round, 64 players in the second round, 32 in the third round, 16 in the fourth round, 8 in the fifth(quarter-final) round, 4 in the sixth round(semi-final), and 2 in the seventh(final) round.

If there were no upsets, rank 65 to 128 will be eliminated in the first round, and rank 33 to 64 will be eliminated in the second round.

Hence the correct answer is round 2.

Video Solution:

Q13. Text Solution:

Total number of rounds = 7

128 players will play in the first round, 64 players in the second round, 32 in the third round, 16 in the fourth round, 8 in the fifth(quarter-final) round, 4 in the sixth round(semi-final), and 2 in the seventh(final) round.

The player who was eliminated in the semi-final will cross 5 rounds. Hence, they won 5 matches.

Video Solution:

Q14. Text Solution:

Total number of rounds = 7

128 players will play in the first round, 64 players in the second round, 32 in the third round, 16 in the fourth round, 8 in the fifth(quarter-final) round, 4 in the sixth round(semi-final), and 2 in the seventh(final) round.

If there were no upsets in the tournament, the quarter-final line-up is:

Rank 1 → Rank 8

Rank 2 → Rank 7

Rank 3 → Rank 6

Rank 4 → Rank 5

Hence, rank 5 will face rank 4 in the quarter final.

Video Solution:

Q15. Text Solution:

Total number of rounds = 7

128 players will play in the first round, 64 players in the second round, 32 in the third round, 16 in the fourth round, 8 in the fifth(quarter-final) round, 4 in the sixth round(semi-final), and 2 in the seventh(final) round.

If there were no upsets, the rank 8 player would beat rank 121 layer in the first round, rank 57 player in the second round, rank 25 player in the third round and rank 9 player in the fourth round.

Out of these players, rank 9 player will play the maximum number of rounds. Rank 9 player will be eliminated in the fourth round and Rank 8 player will be eliminated in the fifth round.

Hence, the correct answer is 3.

Video Solution:

Q16. Text Solution:

Round 1 – 64 team
Round 2 – 32 teams
Round 3 – 16 teams
Round 4 – 8 teams
Round 5 – 4 teams
Round 6 – 2 teams
After 6 rounds we get our winner.
The number of rounds will be = 6
Hence **option (b)**

Video Solution:

Q17. Text Solution:

Round 1 – 64 teams – 32 matches played
Round 2 – 32 teams – 16 matches played
Round 3 – 16 teams – 8 matches played
Round 4 – 8 teams – 4 matches played
Round 5 – 4 teams – 2 matches played
Round 6 – 2 teams – 1 match played.
Total number of matches = 32 + 16 + 8 + 4 + 2 + 1 = 63
Or
One can directly find this as, out of these 64 students, 1 student will be the winner and 63 will be the looser. To eliminate 63 students from the knock out tournament we have to play **63** matches.
Hence option c.

Video Solution:

Q18. Text Solution:

Let suppose if every upset is in favour of seed 9 then, Round 1 – 64 teams – 32 matches – seed 9 plays with seed 56 and seed 9 won – then there is no upset. Similarly, in round 2 – 32 teams – 16 matches – seed 9 plays with seed 24 and seed 9 won – then there is no upset.
Now, in round 3 – 16 teams – 8 matches – seed 9 plays with seed 8 and seed 9 won – then there is 1 upset because lower seeded student won and higher seeded student lose.
Now, in round 4 – 8 teams – 4 matches – Seed 9 plays with seed 1 and seed 9 won – then there is another upset because lower seeded student won and higher seeded student lose.
Now we have used all upsets.
Now, in round 5 – 4 teams – 2 matches – Seed 9 plays with seed 4 and if seed 9 won then there is another upset which is not possible so in this case seed 4 won the match and seed 9 will be eliminated.
Hence, we can say that seed 9 will never won the tournament even if all these two seeds are in their favour.
Hence **option b**.

Video Solution:

Q19. Text Solution:

In round 2 – Seed 7 plays with Seed 26 so option (a) cannot be the answer.
In round 1 – Seed 7 plays with Seed 58 so option (b) cannot be the answer.

In round 3 – Seed 7 plays with Seed 10 so option (c) cannot be the answer.
In round 4 – Seed 7 does not play with Seed 3 so **option (d)** will be the correct choice.

Video Solution:

Q20. Text Solution:

We need to find the minimum possible upset and make sure that student seeded 13 won the tournament.
Round 1 – seed 13 plays with seed 52 – seed 13 won the match – 0 upset
Round 2 – seed 13 plays with seed 20 – seed 13 won the match – 0 upset.
Round 3 – seed 13 plays with seed 4 – Seed 13 won the match – 1 Upset
From now onwards if seed 13 won the match, then 1 upset will happens.
In round 3, round 4, round 5 and round 6 1 upset happens.
Hence **option (c)** will be the correct choice.

Video Solution:

Q21. Text Solution:

In Round 1 – 8 matches played
In round 2 – 4 matches played
In round 3 – 2 matches played
In round 4 – 1 match is played
Total number of matches – 8 + 4 + 2 + 1 = **15**

Video Solution:

Q22. Text Solution:

Round 1:

Match 1	A v/s P
Match 2	B v/s O
Match 3	C v/s N
Match 4	D v/s M
Match 5	E v/s L
Match 6	F v/s K
Match 7	G v/s J
Match 8	H v/s I

Round 2:

Match 1	A/P v/s H/I
Match 2	B/O v/s G/J
Match 3	C/N v/s F/K
Match 4	D/M v/s E/L

Round 3 (Semi Final):

Match 1	A/P/H/I v/s D/M/E/L
Match 2	B/O/G/J v/s C/N/F/K

Round 4 (Final):

A/P/H/I/D/M/E/L v/s B/O/G/J/C/N/F/K
If C and G lose in the first round, D/M/E/L play against A in Semi Final.
As we can see our options, option (a) will be the correct choice here.

Video Solution:

Q23. Text Solution:

Round 1:

Match 1	A v/s P
Match 2	B v/s O

Match 3	C v/s N
Match 4	D v/s M
Match 5	E v/s L
Match 6	F v/s K
Match 7	G v/s J
Match 8	H v/s I

Round 2:

Match 1	A/P v/s H/I
Match 2	B/O v/s G/J
Match 3	C/N v/s F/K
Match 4	D/M v/s E/L

Round 3 (Semi Final):

Match 1	A/P/H/I v/s D/M/E/L
Match 2	B/O/G/J v/s C/N/F/K

Round 4 (Final):

A/P/H/I/D/M/E/L v/s B/O/G/J/C/N/F/K

If match 4 in round 1 is an upset, then:

Round 2:

A's match will be v/s H or I

If match 3 in round 2 is an upset, then

Round 3 (Semi Final):

A's match will be v/s M/E/L

Video Solution:

Q24. Text Solution:

Round 1:

Match 1	A v/s P
Match 2	B v/s O
Match 3	C v/s N
Match 4	D v/s M
Match 5	E v/s L
Match 6	F v/s K
Match 7	G v/s J
Match 8	H v/s I

Round 2:

Match 1	A/P v/s H/I
Match 2	B/O v/s G/J
Match 3	C/N v/s F/K
Match 4	D/M v/s E/L

Round 3 (Semi Final):

Match 1	A/P/H/I v/s D/M/E/L
Match 2	B/O/G/J v/s C/N/F/K

Round 4 (Final):

A/P/H/I/D/M/E/L v/s B/O/G/J/C/N/F/K

If the top 8 seeded players reach the quarter-final (Round 2):

Round 2:

Match 1	A v/s H
Match 2	B v/s G
Match 3	C v/s F
Match 4	D v/s E

Round 3 (Semi Final):

Match 1	A/H v/s D/E
Match 2	B/G v/s C/F

Round 4 (Final):

A v/s B/G/C/F

B/G/C/F could be the one who can play against A in the Final so we can say that **option D** will be the correct choice.

Video Solution:

Q25. Text Solution:

Round 1:

Match 1	A v/s P
Match 2	B v/s O
Match 3	C v/s N
Match 4	D v/s M
Match 5	E v/s L
Match 6	F v/s K
Match 7	G v/s J

Match 8	H v/s I

Round 2:

Match 1	A/P v/s H/I
Match 2	B/O v/s G/J
Match 3	C/N v/s F/K
Match 4	D/M v/s E/L

Round 3 (Semi Final):

Match 1	A/P/H/I v/s D/M/E/L
Match 2	B/O/G/J v/s C/N/F/K

Round 4 (Final):

A/P/H/I/D/M/E/L v/s B/O/G/J/C/N/F/K

If seed 7 i.e. G wins the tournament

In round 1 – Seed 7 plays with Seed 10 – seed 7 won – no upset

In round 2 – Seed 7 plays with Seed 2 – seed 7 won – First upset.

Hence **option (B)**.

Video Solution:

Q26. Text Solution:

Round 1:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8	Match-9	Match-10	Match-11
6 v/s 27	7 v/s 26	8 v/s 25	9 v/s 24	10 v/s 23	11 v/s 22	12 v/s 21	13 v/s 20	14 v/s 19	15 v/s 18	16 v/s 17

Round 2:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8
1 v/s 16/17	2 v/s 15/18	3 v/s 14/19	4 v/s 13/20	5 v/s 12/21	6/27 v/s 11/22	7/26 v/s 10/23	8/25 v/s 9/24

Round 3:

Match-1	Match-2	Match-3	Match-4
1/16/17 v/s 8/25/9/24	2/15/18 v/s 7/26/10/23	3/14/19 v/s 6/27/11/22	4/13/20 v/s 5/12/21

Round 4:

Match-1	Match-2
1/16/17/8/25/9/24 v/s	2/15/18/7/26/10/23 v/s
4/13/20/5/12/21	3/14/19/6/27/11/22

Round 5:

1/16/17/8/25/9/24/4/13/20/5/12/21 v/s 2/15/18/7/26/10/23/3/14/19/6/27/11/22

The number of matches in the tournament:

Round 1 = 11

Round 2 = 8

Round 3 = 4

Round 4 = 2

Round 5 = 1

The total matches = 11 + 8 + 4 + 2 + 1 = 26

Video Solution:

Q27. Text Solution:

Round 1:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8	Match-9	Match-10	Match-11
6 v/s 27	7 v/s 26	8 v/s 25	9 v/s 24	10 v/s 23	11 v/s 22	12 v/s 21	13 v/s 20	14 v/s 19	15 v/s 18	16 v/s 17

Round 2:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8
1 v/s 16/17	2 v/s 15/18	3 v/s 14/19	4 v/s 13/20	5 v/s 12/21	6/27 v/s 11/22	7/26 v/s 10/23	8/25 v/s 9/24

Round 3:

Match-1	Match-2	Match-3	Match-4
1/16/17 v/s 8/25/9/24	2/15/18 v/s 7/26/10/23	3/14/19 v/s 6/27/11/22	4/13/20 v/s 5/12/21

Round 4:

Match-1	Match-2
1/16/17/8/25/9/24 v/s 4/13/20/5/12/21	2/15/18/7/26/10/23 v/s 3/14/19/6/27/11/22

Round 5:

1/16/17/8/25/9/24/4/13/20/5/12/21 v/s 2/15/18/7/26/10/23/3/14/19/6/27/11/22

To become the tournament champion, the minimum number of matches a player must win: That player must be one among Rank 1 to 5 and must win 4 matches (Round 2, 3, 4, and 5) to become the tournament champion.

Video Solution:

Q28. Text Solution:

The match is called an **upset**, as a lower-ranked player (Rank 10) defeated a higher-ranked player (Rank 7).

Option C is correct.

Video Solution:

Q29. Text Solution:

Round 1:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8	Match-9	Match-10	Match-11
6 v/s 27	7 v/s 26	8 v/s 25	9 v/s 24	10 v/s 23	11 v/s 22	12 v/s 21	13 v/s 20	14 v/s 19	15 v/s 18	16 v/s 17

Round 2:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8
1 v/s 16/17	2 v/s 15/18	3 v/s 14/19	4 v/s 13/20	5 v/s 12/21	6/27 v/s 11/22	7/26 v/s 10/23	8/25 v/s 9/24

Round 3:

Match-1	Match-2	Match-3	Match-4
1/16/17 v/s 8/25/9/24	2/15/18 v/s 7/26/10/23	3/14/19 v/s 6/27/11/22	4/13/20 v/s 5/12/21

Round 4:

Match-1	Match-2
1/16/17/8/25/9/24 v/s 4/13/20/5/12/21	2/15/18/7/26/10/23 v/s 3/14/19/6/27/11/22

Round 5:

1/16/17/8/25/9/24/4/13/20/5/12/21 v/s 2/15/18/7/26/10/23/3/14/19/6/27/11/22

To have minimum number of upsets, other than Rank 5's match, higher rank won ahainst lower rank in every other match.

To become champion, Rank 5 will win the match in:

Round 2 against Rank 12 (Regular Win)

Round 3 against Rank 4 (Upset)

Round 4 against Rank 1 (Upset)

Round 5 against Rank 2 (Upset)

Hence, a minimum of 3 upsets.

Video Solution:

Q30. Text Solution:

Round 1:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8	Match-9	Match-10	Match-11
6 v/s 27	7 v/s 26	8 v/s 25	9 v/s 24	10 v/s 23	11 v/s 22	12 v/s 21	13 v/s 20	14 v/s 19	15 v/s 18	16 v/s 17

Round 2:

Match-1	Match-2	Match-3	Match-4	Match-5	Match-6	Match-7	Match-8
1 v/s 16/17	2 v/s 15/18	3 v/s 14/19	4 v/s 13/20	5 v/s 12/21	6/27 v/s 11/22	7/26 v/s 10/23	8/25 v/s 9/24

Round 3:

Match-1	Match-2	Match-3	Match-4
1/16/17 v/s 8/25/9/24	2/15/18 v/s 7/26/10/23	3/14/19 v/s 6/27/11/22	4/13/20 v/s 5/12/21

Round 4:

Match-1	Match-2
1/16/17/8/25/9/24 v/s 4/13/20/5/12/21	2/15/18/7/26/10/23 v/s 3/14/19/6/27/11/22

Round 5:

1/16/17/8/25/9/24/4/13/20/5/12/21 v/s

2/15/18/7/26/10/23/3/14/19/6/27/11/22

Given that Match 5 of Round 2 was the first upset of the tournament, therefore,
In Round 2, Match 5: Rank 5 v/s 12: Rank 12 is the winner.
Therefore,
Option A: "The player ranked 21 can become the tournament champion." can never take place.
Option B: "The player ranked 12 could have faced the player ranked 4 in Round 3." can be possible if Rank 4 win all its previous games.

Video Solution: