GAMES & TOURNAMENT – I

Direction: A and B are playing a game of coins, in which A and B have to pick any no. of coins from 1-6, alternately. And person picking up the last coin will lose the game. So: (Finish the table will lose the game)

1. If there are 50 coins on the table, how many coins B should pick to ensure his coin?

2. If there are 63 coins on the table at a stage, then how many coins A should pick [assuming it is a chance of A] to ensure his coin?

3. If there are 106 coins on the table at a stage, then how many coins B should pick to ensure his win?

4. If another game, the person picking the last coin wins the game, then how many coins A should pick to ensure his win, if there are 60 coins on the table at a stage?

Direction: Geeta and Neeta are playing a game which involves picking up coins kept on a table. The players take turns alternately and each player in her turn has to pick at least two and at most five coins except when there is only one coin left on the table and the player has to pick that coin in her turn. Both players are equally intelligent and play to the best of their abilities so as to win the game.

Additional data
Assume that the player who picks up the last coin loses the game.
5. During a game when it was Geeta's turn to play, there were 32 coins left on the table. Which of the following can be the number of coins Geeta should pick up so as to win the game, no matter how Neeta plays?
   (A) 1   (B) 2   (C) 4   (D) 5

6. During Neeta s turn if she removed four coins from the table which made sure that she won the game. then which of the following could have been the number of coins on the table before she removed the four coins?
   (A) 45   (B) 52   (C) 76   (D) None of these

Additional data for question:
Assume that the player who picks up the last coin wins the game.
7. During a game when it was Neeta's turn to play. there were 28 coins left on the table. Which of the following is the number of coins she should pick up so as to insure her win?
   (A) 1   (B) 2   (C) 4   (D) Neeta cannot win

8. If during her turn Neeta had to remove two coins so as to ensure her win, then which of the following could have been the number of coins on the table before she removed the coins?
   (A) 25   (B) 30   (C) 50   (D) More then one of the above

Direction: You are playing a matchstick game with Mr. Bond. There are N matchsticks on a table. On a player's turn, he can pick any number of matchsticks up to 5. It is your turn first. Assuming that you are smart and will play to win answer the following questions.

The one who picks the last matchstick loses the game.

9. The smallest value of N (greater than 15) that ensures a win for Mr. Bond is
   a) 19   b) 20   c) 18   d) 16

10. The largest of N (less than 50) that ensures a win for Mr. Bond is
    a) 46   b) 47   c) 48   d) 49

11. If N = 63 how many matchsticks will you pick in your first turn to ensure your win?
    a) 3   b) 2   c) 4   d) 1

The one who picks the last matchstick wins the game.

12. If N=57 how many matchsticks will you pick in your first turn to ensure your win?
    a) 2   b) 4   c) 3   d) you cannot win

13. Which of the following should be the value of N that ensures a win for Mr. Bond?
    a) 48   b) 49   c) 17   d) 50

14. If I pick two matchsticks I will lose the game. Which of the following can be the value of N?
    a) 62   b) 65   c) 74   d) 50

Direction: There are 200 teams participate in a knockout tournament where they form groups and play against each other. So in round 1 there will be 100 teams in each groups, resulting in 100 winners. round 2 will then have 50 each in a group and so on. If there are an odd number of teams in any rounds, one team is selected at random and granted a " bye". The tournament continues till a winner is decided. No matches end in a draw.

15. How many matches must be played to decide the winner?

16. How many rounds took place?

17. How many "byes" were granted?

KNOCK-OUT TOURNAMENT
In the table below is the listing of Teams, seeded from highest (#1) to lowest (#16), who are due to play in an Association of Cricket tournament.

This tournament has three knockout rounds before the final, i.e., first round, Quarter-finals, and semi-finals. In the first round, the highest seeded team plays the lowest seeded team (seed#16) which is designated match No. 1 of first round; the 2nd seeded team plays with the 15th seeded team which is designated match No. 2 of the first round, and so on. Thus, for instance, match No. 8 of first round is to be played between 8th seeded team and the 9th seeded team.

In the second round, the winner of match No. 1 of first round plays the winner of match No. 8 of first round and is designated match No. 1 of second round. Similarly, the winner of match No. 2 of first round plays the winner of match No. 7 of first round, and is designated match No. 2 of second round. Thus, for instance, match No. 4 of the second round is to be played between the winner of match No. 4 of first round and the winner of match No. 5 of first round. The same pattern is followed for later rounds as well.

Seed Number	1	2	3	4	5	6	7	8
Team Name	Australia	India	South-Africa	Sri Lanka	Pakistan	England	West Indies	New Zealand
Seed Number	9	10	11	12	13	14	15	16
Team Name	Bangladesh	Zimbabwe	Kenya	Netherlands	Afghanistan	UAE	Bermuda	Scotland

18. If there are no upsets in the first round, and only match Nos. 2, 3, and 4 of the second round result in upsets, then who would meet Pakistan in semi finals, in case Pakistan reaches semi finals?
    a) India   b) England   c) Australia   d) Didn't reach in semi finals

19. If South-Africa and Sri-Lanka lose in the first round, while Bangladesh and India make it to the semifinals, then who would play with Australia in the second round, in the event Australia reaches second round?
    a) Bangladesh   b) Scotland   c) New Zealand   d) India

20. If, in the first round, all even numbered matches (and none of the odd numbered ones) result in upsets, and there are no upsets in the second round, then which team facing South-Africa in semi-finals?
    a) Australia   b) West-Indies   c) Bermuda   d) India

21. How many matches are played in this tournament for getting final winner?
    a) 32   b) 24   c) 16   d) 15

DIRECTIONS: Answer questions on the basis of the information given below.
In the table below is the listing of players, seeded from highest (#a) to lowest (#32), who is due to play in an Association of Tennis Players (ATP)tournament for women. This tournament has four knockout rounds before the final, i.e., first round, second round, quarterfinals, and semi-finals.
In the first round, the highest-seeded player plays the lowest-seeded player(seed # 32) which is designated match No. 1 of the first round; the 2nd seeded player plays the 31st-seeded player which is designated match No. 2 of the first round, and so on. Thus, for instance, match No. 16 of the first round is to be played between the 16th seeded player and the 17th seeded player.
   a) In the second round, the winner of match No. 1 of-first round plays the winner of match No. 16 of the first round and is designated match No. 1 of the second round. Similarly, the winner of match No, 2 of first-round plays the winner of match No. 15 of the first round and is designated match No. 2 of the second round. Thus, for instance, match No. 8 of the second round is to be played between the winner of match No. 8 of the first round and the winner of match No. 9 of the first round. The same pattern is followed for later rounds as well.

Seed#	Name of Player	Seed#	Name of Player	Seed#	Name of Player
1	Maria Sharapova	12	Mary Pierce	23	Silvia Farina Elia
2	Lindsay Davenport	13	Anastasia Myskina	24	Tatiana Golovin
3	Amelie Mauresmo	14	Alicia Molik	25	Shinobu Asagoe
4	Kim Clijsters	15	Nathalie Dechy	26	Francesca Schiavone
5	Svetlana Kuznetsova	16	Elena Bovina	27	Nicole Vaidisova
6	Elena Dementieva	17	Jelena Jankovic	28	Gisela Dulko
7	Justine Henin	18	Ana Ivanovic	29	Flavia Pennetta
8	Serena Williams	19	Vera Zvonareva	30	Anna Chakvetadze
9	Nadia Petrova	20	Elena Likhovtseva	31	Al Sugiyama
10	Venus Williams	21	Daniela Hantuchova	32	Anna-lena Groenefeld
11	Patty Schnyder	22	Dinara Safina		

22. If there are no upsets (a lower-seeded player beating a higher-seeded player) in the first round, and only match Nos. 6, 7, and 8 of the second-round result in upsets, then who would meet Lindsay Davenport in quarter-finals, in case Davenport reaches quarter-finals?
a) Justine Henin
b) Nadia Petrova
c) Patty Schnyder
d) Venus Williams

23. If Elena Dementieva and Serena Williams lose in the second round, while Justine Henin and Nadia Petrova make it to the semi-finals, then who would play Maria Sharapova in the quarterfinals, in the event Sharapova reaches the quarterfinals?
a) Dinara Safina
b) Justine Henin
c) Nadia Petrova
d) Patty Schnyder

24. If, in the first round, all even-numbered matches (and none of the odd-numbered ones) result in upsets, and there are no upsets in the second round, then who could be the lowest-seeded player-facing Maria Sharapova in the semi-finals?
a) Anastasia Myskina
b) Flavia Pennetta
c) Nadia Petrova
d) Svetlana Kuznetsova

25. If the top eight seeds make it to the quarterfinals, then who, amongst the players listed below, would definitely not play against Maria Sharapova in the final, in case Sharapova reaches the final?
a) Amelie Mauresmo
b) Elena Dementieva
c) Kim Clijsters
d) Lindsay Davenport

Direction: There are 16 cricket teams which are divided into 2 groups of 8 each. Each team in a group plays against one another on a round-robin basis. Draws are not allowed. The top four teams from each group will qualify for the next round i.e. round 2. In the case of teams having the same number of wins, the team with a better run – the rate would be ranked ahead.

26. What will be the minimum number of wins required to qualify for the next round?

27. What will be the minimum number of wins required to guarantee qualification in the next round?

Direction: Eight teams A, B, C, D, E, F, G, and H participated in a soccer tournament. The rules of the tournament were as follows:
- Each team played each other exactly once in the league stage.
- There were no ties.
- The winner of every match got 2 points while the loser got 0 points.
- The top 4 teams in terms of points in the league stage will advance to the semi-finals.
- If two teams have the same number of points the team with a better goal difference will be ranked higher.

28. Find the total number of matches to be played in the tournament?

29. Find the minimum number of points that a team requires to prosper to the semifinal round.

30. Find the maximum number of points which a team can have and still not make it to the semifinals?

Direction: Sixteen teams have been invited to participate in the ABC Gold Cup cricket tournament. The tournament is conducted in two stages. In the first stage, the teams are divided into two groups. Each group consists of eight teams, with each team playing every other team in its group exactly once. At the end of the first stage, the top four teams from each group advance to the second stage while the rest are eliminated. The second stage comprises several rounds. A round involves one match for each team. The winner of a match in a round advances to the next round, while the loser is eliminated. The team that remains undefeated in the second stage is declared the winner and claims the Gold Cup. The tournament rules are such that each match results in a winner and a loser with no possibility of a tie. In the first stage, a team earns one point for each win and no points for a loss. At the end of the first stage, teams in each group are ranked on the basis of total points to determine the qualifiers advancing to the next stage. Ties are resolved by a series of complex tie-breaking rules so that exactly four teams from each group advance to the next stage.

31. What is the total number of matches played in the tournament?
    a) 28   b) 55   c) 63   d) 35

32. The minimum number of wins needed for a team in the first stage to guarantee its advancement to the next stage is
    a) 5   b) 6   c) 7   d) 4

33. What is the highest number of wins for a team in the first stage in spite of which it would be eliminated at the end of first stage?
    a) 1   b) 2   c) 3   d) 4

34. What is the number of rounds in the second stage of the tournament?
    a) 1   b) 2   c) 3   d) 4

35. Which of the following statements is true?
    a) The winner will have more wins than any other team in the tournament.
    b) At the end of the first stage, no team eliminated from the tournament will have more wins than any of the teams qualifying for the second stage.
    c) c. It is possible that the winner will have the same number of wins in the entire tournament as a team eliminated at the end of the first stage.
    d) The number of teams with exactly one win in the second stage of the tournament is 4.

Direction: There are 16 teams, and they are divided into 2 groups of 8 each. Each team in a group plays against one another on a round-robin basis. Two points are awarded for a win, one point for a tie, and zero for a loss. The top four teams from each group will qualify for the next round i.e. round 2. In Round 2, each team of one group will play with each team of group two. At the end of the second round, the top four teams in terms of the points scored advance to the semi-finals and the winners of the semi-finals play the finals. In the case of teams having the same number of wins, the team with a better run rate would be ranked ahead.

36. What is the total number of matches played in the tournament?
    a) 50   b) 56   c) 28   d) 75

37. What is the least number of points with which a team can advance to the round 2?
    a) 5   b) 4   c) 10   d) 8

38. What is the maximum possible number of points that can be scored by a team that is eliminated at the first round?
    a) 14   b) 12   c) 10   d) 8

39. What is the minimum number of matches won by a team that reaches the finals?
    a) 1   b) 2   c) 3   d) 4

40. What is the maximum number of matches won by a team that reaches the finals?
    a) 10   b) 16   c) 15   d) 12