Probability

Model 1: Tossing of Coins

1. When two coins are tossed simultaneously, what is the probability that both the coins show heads as output?

1) $\frac{1}{6}$ 2) $\frac{1}{3}$ 3) $\frac{1}{2}$ 4) $\frac{1}{4}$ 5) None of these

2. When three coins are tossed simultaneously, what is the probability that two coins show tails as output?

1) $\frac{1}{8}$ 2) $\frac{3}{8}$ 3) $\frac{1}{2}$ 4) $\frac{5}{8}$ 5) None of these

Model 2: Rolling of Dice

3. When an unbiased dice is rolled, what is the probability that the output is

(i) 1

1) $\frac{1}{6}$ 2) $\frac{1}{3}$ 3) $\frac{1}{2}$ 4) $\frac{1}{4}$ 5) None of these

(ii) 2

1) $\frac{1}{6}$ 2) $\frac{1}{3}$ 3) $\frac{1}{2}$ 4) $\frac{1}{4}$ 5) None of these

(iii) A prime number

1) $\frac{1}{6}$ 2) $\frac{1}{3}$ 3) $\frac{1}{2}$ 4) $\frac{1}{4}$ 5) None of these

(iv) Greater than 2

1) $\frac{1}{6}$ 2) $\frac{2}{3}$ 3) $\frac{1}{2}$ 4) $\frac{1}{4}$ 5) None of these

4. When two dice are rolled together, what is the probability that the sum of the outputs is 8?

   1) $\frac{1}{36}$ 2) $\frac{7}{36}$ 3) $\frac{5}{36}$ 4) $\frac{8}{36}$ 5) None of these

Model 3: Conditional Selection of Balls/Caps/Marbles

Directions (5 - 9): Study the given information carefully and answer the questions that follow.

A box contains 6 red, 4 blue, 2 green and 3 yellow marbles.

5. If four marbles are picked at random, what is the probability that two are blue, one is green and one is yellow?

   1) $\frac{12}{455}$ 2) $\frac{13}{35}$ 3) $\frac{11}{15}$ 4) $\frac{7}{91}$ 5) None of these

6. If three marbles are picked at random, what is the probability that all are red?

   1) $\frac{1}{6}$ 2) $\frac{1}{21}$ 3) $\frac{2}{15}$ 4) $\frac{5}{21}$ 5) None of these

7. If two marbles are picked at random, what is the probability that either both are yellow or both are green?

   1) $\frac{5}{91}$ 2) $\frac{1}{35}$ 3) $\frac{1}{3}$ 4) $\frac{4}{105}$ 5) None of these

8. If two marbles are picked at random, what is the probability that none is yellow?

   1) $\frac{3}{91}$ 2) $\frac{1}{5}$ 3) $\frac{22}{35}$ 4) $\frac{7}{15}$ 5) None of these

9. If three marbles are picked at random, what is the probability that at least one is blue?

   1) $\frac{4}{15}$ 2) $\frac{58}{91}$ 3) $\frac{11}{15}$ 4) $\frac{22}{91}$ 5) None of these

Directions (10-14): Study the following information carefully to answer the questions that follow.

A box contains 2 blue caps, 4 red caps, 5 green caps and 1 yellow cap.

10. If four caps are picked at random, what is the probability that none is green?

    1) $\frac{7}{99}$ 2) $\frac{5}{99}$ 3) $\frac{7}{12}$ 4) $\frac{5}{12}$ 5) None of these

11. If two caps are picked at random, what is the probability that both are blue?

    1) $\frac{1}{6}$ 2) $\frac{1}{10}$ 3) $\frac{1}{12}$ 4) $\frac{1}{45}$ 5) None of these

12. If one cap is picked at random, what is the probability that it is either blue or yellow?

    1) $\frac{2}{9}$ 2) $\frac{1}{4}$ 3) $\frac{3}{8}$ 4) $\frac{6}{11}$ 5) None of these

13. If two caps are picked at random, what is the probability that at least one is red?

    1) $\frac{1}{3}$ 2) $\frac{16}{21}$ 3) $\frac{19}{33}$ 4) $\frac{7}{19}$ 5) None of these

14. If three caps are picked at random, what is the probability that two are red that two are red and one is green?

    1) $\frac{9}{22}$ 2) $\frac{6}{19}$ 3) $\frac{1}{6}$ 4) $\frac{3}{22}$ 5) None of these

Directions (15-17): Study the given information carefully and answer the questions that follow.

15. There are 3 green 4 red and 5 blue marbles in a bag. If three marbles are picked at random, what is the probability that either all are green or all are red?

    1) $\frac{7}{44}$ 2) $\frac{7}{12}$ 3) $\frac{5}{12}$ 4) $\frac{1}{44}$ 5) None of these

16. If two marbles are drawn at random, what is the probability that both are red?

    1) $\frac{3}{7}$ 2) $\frac{1}{2}$ 3) $\frac{2}{11}$ 4) $\frac{1}{6}$ 5) None of these

17. If three marbles are picked at random, what is the probability that at least one is blue?

1) $\frac{7}{12}$ 2) $\frac{37}{44}$ 3) $\frac{5}{12}$ 4) $\frac{7}{44}$ 5) None of these

Model 4: Miscellaneous

18. The probability that Rohan can solve a question is 3/4 and the probability that Sohan can solve it is 5/8. What is the probability that the question gets solved if both of them try it?

1) $\frac{47}{90}$ 2) $\frac{5}{6}$ 3) $\frac{7}{18}$ 4) $\frac{29}{32}$ 5) None of these

19. A bag contains 5 red and 4 green balls and another bag contains 3 red and 7 black balls. If a ball is drawn from each bag. Find the probability that both are of different colors.

1) $\frac{47}{90}$ 2) $\frac{5}{6}$ 3) $\frac{7}{18}$ 4) $\frac{2}{15}$ 5) None of these

20. A Company has two Grids – Grid 1 and Grid 2. Out of 5 Directors and 4 General Managers of Grid 1, one person is transferred to Grid 2, which has 3 Directors and 7 General Managers. If one person is promoted from Grid 2, then what is the probability that this person is a director?

1) $\frac{32}{99}$ 2) $\frac{4}{45}$ 3) $\frac{20}{99}$ 4) $\frac{3}{10}$ 5) None of these

Answers

1 - 4	2 - 2	3(i)-1	3(ii)-1	3(iii)-3	3(iv)-2	4 - 3	5 - 1	6 - 2
7 - 4	8 - 3	9 - 2	10 - 1	11 - 5	12 - 2	13 - 3	14 - 4	15 - 4
16 - 5	17 - 2	18 - 4	19 - 2	20 - 1				