Practice Exercise

Level - I

1. Two dice are thrown simultaneously. The probability of obtaining a total score of seven is

(a) $\frac{1}{6}$ (b) $\frac{1}{3}$

(c) $\frac{2}{7}$ (d) $\frac{5}{6}$

2. Four balls are drawn at random from a bag containing 5 white, 4 green and 3 black balls. The probability that exactly two of them are white is

(a) $\frac{14}{33}$ (b) $\frac{7}{16}$

(c) $\frac{18}{33}$ (d) $\frac{9}{16}$

3. Two dice are tossed. The probability that the total score is a prime number is :

(a) $\frac{1}{6}$ (b) $\frac{5}{12}$

(c) $\frac{1}{2}$ (d) $\frac{7}{9}$

4. Anil can kill a bird once in 3 shots. On the assumption that he fires 3 shots, find the probability that the bird is killed.

(a) $\frac{1}{3}$ (b) $\left(\frac{1}{3}\right)^3$

(c) $\frac{19}{27}$ (d) $\frac{8}{9}$

5. If A and B are two independent events with $P(A) = 0.6$, $P(B) = 0.3$, then $P(A' \cap B')$ is equal to :

(a) 0.18 (b) 0.28
(c) 0.82 (d) 0.72

6. The probabilities that A and B will die within a year are p and q respectively, then the probability that only one of them will be alive at the end of the year is -

(a) $p + q$ (b) $p + q - pq$
(c) $p + q + pq$ (d) $p + q - 2pq$

7. A pair of dice is thrown thrice. The probability of throwing doublets at least once is

(a) $\frac{1}{36}$ (b) $\frac{25}{216}$

(c) $\frac{125}{216}$ (d) None of these

8. The probability of getting number 5 in throwing a dice is

(a) 1 (b) $\frac{1}{3}$

(c) $\frac{1}{6}$ (d) $\frac{5}{6}$

9. The probability of getting head and tail alternately in three throws of a coin (or a throw of three coins), is

(a) $\frac{1}{8}$ (b) $\frac{1}{4}$

(c) $\frac{1}{3}$ (d) $\frac{3}{8}$

10. A die is thrown once. What is the probability of occurrence of an odd number on the upper face?

(a) $\frac{2}{3}$ (b) $\frac{1}{2}$

(c) $\frac{1}{4}$ (d) $\frac{1}{8}$

11. A die is thrown once. Find the probability that 3 or greater than 3 turns up.

(a) $\frac{1}{2}$ (b) $\frac{1}{3}$

(c) $\frac{1}{4}$ (d) $\frac{2}{3}$

12. Find the probability of getting a multiple of 2 in the throw of a die.

(a) 1/2 (b) 1/4
(c) 1/3 (d) 1/6

13. India and Pakistan play a 5 match test series of hockey, the probability that India wins at least three matches is

(a) $\frac{1}{2}$ (b) $\frac{3}{5}$

(c) $\frac{4}{5}$ (d) None of these

14. The probability that a man can hit a target is 3/4. He tries 5 times. The probability that he will hit the target at least three times is

(a) $\frac{291}{364}$ (b) $\frac{371}{461}$

(c) $\frac{471}{502}$ (d) $\frac{459}{512}$

15. From eighty cards numbered 1 to 80, two cards are selected randomly. The probability that both the cards have the numbers divisible by 4 is given by

(a) $\frac{21}{316}$ (b) $\frac{19}{316}$

(c) $\frac{1}{4}$ (d) None of these

16. The probability of getting sum more than 7 when a pair of dice are thrown is

(a) $\frac{7}{36}$ (b) $\frac{5}{12}$

(c) $\frac{7}{12}$ (d) None of these

17. Two dice are thrown simultaneously then the probability of obtaining a total score of 5 is

(a) $\frac{1}{18}$ (b) $\frac{1}{12}$

(c) $\frac{1}{9}$ (d) None of these

18. The probability that the two digit number formed by digits 1, 2, 3, 4, 5 is divisible by 4 is

(a) $\frac{1}{30}$ (b) $\frac{1}{20}$

(c) $\frac{1}{5}$ (d) None of these

19. Probability of throwing 16 in one throw with three dice is

(a) $\frac{1}{36}$ (b) $\frac{1}{18}$

(c) $\frac{1}{72}$ (d) $\frac{1}{9}$

20. Of a total of 600 bolts, 20% are too large and 10% are too small. The remainder are considered to be suitable. If a bolt is selected at random, the probability that it will be suitable is

(a) $\left(\frac{1}{5}\right)$ (b) $\left(\frac{7}{10}\right)$

(c) $\left(\frac{1}{10}\right)$ (d) $\left(\frac{3}{10}\right)$

21. The probability that in the toss of two dice we obtain the sum 7 or 11 is

(a) $\frac{1}{6}$ (b) $\frac{1}{18}$

(c) $\frac{2}{9}$ (d) $\frac{23}{108}$

22. A card is drawn at random from a pack of 100 cards numbered 1 to 100. The probability of drawing a number which is a square, is

(a) $\frac{1}{10}$ (b) $\frac{1}{100}$

(c) $\frac{9}{10}$ (d) $\frac{90}{100}$

23. The alphabets of word ALLAHABAD are arranged at random. The probability that in the words so formed, all identical alphabets are found together, is

(a) 1/63 (b) 16/17

(c) 5!/9! (d) None of these

24. The probability that Krishna will be alive 10 years hence, is $\frac{7}{15}$ and that Hari will be alive is $\frac{7}{10}$. What is the probability that both Krishna and Hari will be dead 10 years hence ?

(a) $\frac{21}{150}$ (b) $\frac{24}{150}$

(c) $\frac{49}{150}$ (d) $\frac{56}{150}$

25. The probability that in the random arrangement of the letters of the word 'UNIVERSITY', the two I's does not come together is

(a) $\frac{4}{5}$ (b) 1/5

(c) 1/10 (d) 9/10

26. Among 15 players, 8 are batsmen and 7 are bowlers. Find the probability that a team is chosen of 6 batsmen and 5 bowlers:

(a) $\frac{{}^{8}C_{6} \times {}^{7}C_{5}}{{}^{15}C_{11}}$ (b) $\frac{28}{15}$

(c) $\frac{15}{28}$ (d) None of these

27. A four digit number is formed by the digits 1, 2, 3, 4 with no repetition. The probability that the number is odd is

(a) zero (b) $\frac{1}{3}$

(c) $\frac{1}{4}$ (d) None of these

28. X speaks truth in 60% and Y in 50% of the cases. The probability that they contradict each other narrating the same incident is

(a) $\frac{1}{4}$ (b) $\frac{1}{3}$

(c) $\frac{1}{2}$ (d) $\frac{2}{3}$

29. An integer is chosen at random from the numbers 1, 2, ..., 25. The probability that the chosen number is divisible by 3 or 4, is

(a) $\frac{2}{25}$ (b) $\frac{11}{25}$

(c) $\frac{12}{25}$ (d) $\frac{14}{25}$

30. The probability that a leap year will have 53 Friday or 53 Saturday, is

(a) $\frac{2}{7}$ (b) $\frac{3}{7}$

(c) $\frac{4}{7}$ (d) $\frac{1}{7}$

31. An experiment yields 3 mutually exclusive and exhaustive events A, B, C. If $P(A) = 2P(B) = 3P(C)$, then $P(A)$ is equal to

(a) $\frac{1}{11}$ (b) $\frac{2}{11}$

(c) $\frac{3}{11}$ (d) $\frac{6}{11}$

32. If P $(A \cup B) = 0.8$ and $P(A \cap B) = 0.3$, then $P(A') + P(B')$ equals to

(a) 0.3 (b) 0.5

(c) 0.7 (d) 0.9

33. Five coins whose faces are marked 2, 3 are thrown. What is the probability of obtainining a total of 12 ?

(a) $\frac{1}{16}$ (b) $\frac{3}{16}$

(c) $\frac{5}{16}$ (d) $\frac{7}{16}$

34. An aircraft has three engines A, B and C. The aircraft crashes if all the three engines fail. The probabilities of failure are 0.03, 0.02 and 0.05 for engines A, B and C respectively. What is the probability that the aircraft will not crash?

(a) 0.00003 (b) 0.90

(c) 0.99997 (d) 0.90307

35. The probability that a student passes in mathematics is 4/9 and that he passes in physics is 2/5. Assuming that passing in mathematics and physics are independent of each other, what is the probability that he passes in mathematics but fails in physics?

(a) $\frac{4}{15}$ (b) $\frac{8}{45}$

(c) $\frac{26}{45}$ (d) $\frac{19}{45}$

36. From a pack of 52 cards, two cards are drawn, the first being replaced before the second is drawn. What is the probability that the first is a diamond and the second is a king?

(a) $\frac{1}{4}$ (b) $\frac{4}{13}$

(c) $\frac{1}{52}$ (d) $\frac{4}{15}$

37. In a lottery, 16 tickets are sold and 4 prizes are awarded. If a person buys 4 tickets,what is the probability of his winning a prize?

(a) $\frac{4}{16^4}$ (b) $\frac{175}{256}$

(c) $\frac{1}{4}$ (d) $\frac{81}{256}$

38. Each of A and B tosses two coins. What is the probability that they get equal number of heads?

(a) $\frac{3}{16}$ (b) $\frac{5}{16}$

(c) $\frac{4}{16}$ (d) $\frac{6}{16}$

39. The chance of winning the race of the horse A is 1/5 and that of horse B is 1/6. What is the probability that the race will be won by A or B ?

(a) 1/30 (b) 1/3

(c) 11/30 (d) 1/15

40. What is the probability of two persons being born on the same day (ignoring date)?

(a) 1/49 (b) 1/365

(c) 1/7 (d) 2/7

41. The probabilities of two events A and B are given as $P(A) = 0.8$ and $P(B) = 0.7$. What is the minimum value of $P(A \cap B)$?

(a) 0 (b) 0.1

(c) 0.5 (d) 1

42. In tossing three coins at a time, what is the probability of getting at most one head?

(a) $\frac{3}{8}$ (b) $\frac{7}{8}$

(c) $\frac{1}{2}$ (d) $\frac{1}{8}$

43. Two balls are selected from a box containing 2 blue and 7 red balls. What is the probability that at least one ball is blue?

(a) $\frac{2}{9}$ (b) $\frac{7}{9}$

(c) $\frac{5}{12}$ (d) $\frac{7}{12}$

44. The probability of guessing a correct answer is $\frac{x}{12}$. If the probability of not guessing the correct answer is $\frac{2}{3}$, then what is x equal to?

(a) 2 (b) 3

(c) 4 (d) 6

45. A man and his wife appear for an interview for two posts. The probability of the husband's selection is $\frac{1}{7}$ and that of the wife's selection is $\frac{1}{5}$. The probability that only one of them will be selected is

(a) $\frac{6}{7}$ (b) $\frac{4}{35}$

(c) $\frac{6}{35}$ (d) $\frac{2}{7}$

46. The probability that a person will hit a target in shooting practice is 0.3. If he shoots 10 times, the probability that he hits the target is

(a) 1 (b) $1-(0.7)^{10}$

(c) $(0.7)^{10}$ (d) $(0.3)^{10}$

47. Suppose six coins are tossed simultaneously. Then the probability of getting at least one tail is

(a) $\frac{71}{72}$ (b) $\frac{53}{54}$

(c) $\frac{63}{64}$ (d) $\frac{1}{12}$

48. In a single throw with four dice, the probability of throwing seven is

(a) $\frac{4}{6^4}$ (b) $\frac{8}{6^4}$

(c) $\frac{16}{6^4}$ (d) $\frac{20}{6^4}$

49. Six dice are thrown. The probability that different number will turn up is

(a) $\frac{129}{1296}$ (b) $\frac{1}{54}$

(c) $\frac{5}{324}$ (d) $\frac{5}{54}$

50. If two dice are tossed, find the probability of throwing a total of ten or more.

(a) $\frac{1}{6}$ (b) $\frac{1}{3}$

(c) $\frac{1}{4}$ (d) $\frac{2}{3}$

51. From a pack of 52 cards two are drawn with replacement. The probability, that the first is a diamond and the second is a king, is

(a) 1/26 (b) 17/2704

(c) 1/52 (d) None of these

52. Two cards are selected at random from a deck of 52 playing cards. The probability that both the cards are greater than 2 but less than 9 is

(a) $\frac{46}{221}$ (b) $\frac{63}{221}$

(c) $\frac{81}{221}$ (d) $\frac{93}{221}$

53. If A and B are two independent events such that $P(A)=\frac{1}{2}$ and $P(B)=\frac{1}{5}$, then which is not true?

(a) $P(A\cup B)=\frac{3}{5}$ (b) $P(A/B)=\frac{1}{4}$

(c) $P(A/A\cup B)=\frac{5}{6}$ (d) $P(A\cap B/\bar{A}\cup\bar{B})=0$

54. The probability that a man will live 10 more years is $\frac{1}{4}$ and the probability that his wife will live 10 more years is $\frac{1}{3}$. Then the probability that neither will be alive in 10 years is

(a) $\frac{5}{12}$ (b) $\frac{7}{12}$

(c) $\frac{1}{2}$ (d) $\frac{11}{12}$

55. A and B play a game where each is asked to select a number from 1 to 25. If the two numbers match, both of them win a prize. The probbility that they will not win a prize in a single trial is

(a) $\frac{1}{25}$ (b) $\frac{24}{25}$

(c) $\frac{2}{25}$ (d) None of these

56. The probability of happening an event A in one trial is 0.4. The probability that the event A happens at least once in three independent trials is –

(a) 0.936 (b) 0.216

(c) 0.904 (d) 0.784

57. Find the probability of drawing a jack or an ace from a pack of playing cards.

(a) $\frac{1}{8}$ (b) $\frac{1}{6}$

(c) $\frac{1}{3}$ (d) $\frac{2}{13}$

58. When two dice are thrown, the probability that the difference of the numbers on the dice is 2 or 3 is

(a) $\frac{7}{18}$ (b) $\frac{3}{11}$

(c) $\frac{5}{18}$ (d) $\frac{1}{2}$

59. In shuffling a pack of cards three are accidentally dropped. The probability that the missing cards are of distinct colours is

(a) $\frac{169}{425}$ (b) $\frac{165}{429}$

(c) $\frac{162}{459}$ (d) $\frac{164}{529}$

60. Four persons are selected at random out of 3 men, 2 women and 4 children. The probability that there exactly 2 children in the selection is

(a) $\frac{11}{21}$ (b) $\frac{9}{21}$

(c) $\frac{10}{21}$ (d) None of these

61. It is given that the events A and B are such that $P(A)=\frac{1}{4}, P(A\mid B)=\frac{1}{2}$ and $P(B\mid A)=\frac{2}{3}$. Then $P(B)$ is

(a) $\frac{1}{6}$ (b) $\frac{1}{3}$

(c) $\frac{2}{3}$ (d) $\frac{1}{2}$

62. A coin is tossed and a dice is rolled. The probability that the coin shows the head and the dice shows 6 is

(a) $\frac{1}{2}$ (b) $\frac{1}{6}$

(c) $\frac{1}{12}$ (d) $\frac{1}{24}$

Level - II

1. If $P(A) = 0.8$, $P(B) = 0.9$, $P(AB) = p$, which one of the following is correct?

(a) $0.72 \le p \le 0.8$ (b) $0.7 \le p \le 0.8$

(c) $0.72 < p < 0.8$ (d) $0.7 < p < 0.8$

2. A, B, C are three mutually exclusive event associated with a random experiment. Find $P(A)$ if it is given that $P(B) = 3/2\ P(A)$ and $P(C) = 1/2\ P(B)$.

(a) $\frac{4}{13}$ (b) $\frac{2}{3}$

(c) $\frac{12}{13}$ (d) $\frac{1}{13}$

3. The probability that A can solve a problem is $\frac{2}{3}$ and B can solve it is $\frac{3}{4}$. If both attempt the problem, what is the probability that the problem gets solved?

(a) $\frac{11}{12}$ (b) $\frac{7}{12}$

(c) $\frac{5}{12}$ (d) $\frac{9}{12}$

4. A dice is thrown 6 times. If 'getting an odd number' is a 'success', the probability of 5 successes is

(a) $\frac{1}{10}$ (b) $\frac{3}{32}$

(c) $\frac{5}{6}$ (d) $\frac{25}{26}$

5. A bag contains 5 white and 3 black balls, and 4 are successively drawn out and not replaced. What's the chance of getting different colours alternatively?

(a) $\frac{1}{6}$ (b) $\frac{1}{5}$

(c) $\frac{1}{4}$ (d) $\frac{1}{7}$

6. A bag contains 5 white and 7 black balls and a man draws 4 balls at random. The odds against these being all black is

(a) 7 : 92 (b) 92 : 7

(c) 92 : 99 (d) 99 : 92

7. The letters of the word SOCIETY are placed at random in a row. The probability that the three vowels come together is

(a) $\frac{1}{6}$ (b) $\frac{1}{7}$

(c) $\frac{2}{7}$ (d) $\frac{5}{6}$

8. Course materials are sent to students by a distance education institution. The probability that they will send a wrong programme's study material is $\frac{1}{5}$. There is a probability of $\frac{3}{4}$ that the package is damaged in transit, and there is a probability of $\frac{1}{3}$ that there is a short shipment. What is the probability that the complete material for the course arrives without any damage in transit ?

(a) $\frac{4}{5}$ (b) $\frac{8}{60}$

(c) $\frac{8}{15}$ (d) $\frac{4}{20}$

9. A coin is tossed 5 times. What is the probability that head appears an odd number of times?

(a) $\frac{2}{5}$ (b) $\frac{1}{5}$

(c) $\frac{1}{2}$ (d) $\frac{4}{25}$

10. Two dice are tossed. The probability that the total score is a prime number is

(a) $\frac{1}{6}$ (b) $\frac{5}{12}$

(c) $\frac{1}{2}$ (d) $\frac{7}{9}$

11. The probability that the sum of the square of the two numbers, which show up when two fair dice are thrown, is even is

(a) $\frac{3}{7}$ (b) $\frac{4}{7}$

(c) $\frac{5}{7}$ (d) None of these

12. There are 5 pairs of shoes in a cupboard from which 4 shoes are picked at random. The probability that there is at least one pair is

(a) $\frac{8}{21}$ (b) $\frac{11}{21}$

(c) $\frac{13}{21}$ (d) $\frac{12}{31}$

13. The fair dice are thrown. The probability that the number appear are not all distinct is

(a) $\frac{5}{9}$ (b) $\frac{4}{9}$

(c) $\frac{1}{6}$ (d) $\frac{5}{6}$

14. Two dice are thrown simultaneously. What is the probability of obtaining a multiple of 2 on one of them and a multiple of 3 on the other

(a) $\frac{5}{36}$ (b) $\frac{11}{36}$

(c) $\frac{1}{6}$ (d) $\frac{1}{3}$

15. Two dice are thrown at a time, find the probability that the sums of the numbers on the upper faces of the dice are equal to 7.

(a) $\frac{1}{8}$ (b) $\frac{1}{4}$

(c) $\frac{1}{3}$ (d) $\frac{1}{6}$

16. One card is drawn from a well-shuffled pack of 52 cards. What is the probability, that it is not the ace of hearts ?

(a) $\frac{51}{52}$ (b) $\frac{1}{52}$

(c) $\frac{1}{12}$ (d) $\frac{1}{2}$

17. A dice is thrown twice. The probability of getting 4, 5 or 6 in the first throw and 1, 2, 3 or 4 in the second throw is

(a) 1/3 (b) 2/3

(c) 1/2 (d) 1/4

18. Ram and Shyam appear for an interview for two vacancies in an organisation for the same post. The probabilities of their selection are 1/6 and 2/5 respectively. What is the probability that none of them will be selected?

(a) 5/6 (b) 1/5

(c) 1/2 (d) 3/5

19. A class consists of 80 students, 25 of them are girls and 55 are boys. If 10 of them are rich and the remaining poor and also 20 of them are intelligent then the probability of selecting an intelligent rich girl is

(a) $\frac{5}{128}$ (b) $\frac{25}{128}$

(c) $\frac{5}{512}$ (d) None of these

20. If the probability of A to fail in an examination is 0.2 and that for B is 0.3, then probability that either A or B is fail, is :

(a) 0.5 (b) 0.44

(c) 0.8 (d) 0.25

21. The probability of choosing at random a number that is divisible by 6 or 8 from among 1 to 90 is equal to

(a) $\frac{1}{6}$ (b) $\frac{1}{30}$

(c) $\frac{11}{80}$ (d) $\frac{23}{90}$

22. In single cast with two dice the odds against drawing 7 is

(a) 5 (b) $\frac{1}{5}$

(c) 6 (d) $\frac{1}{6}$

23. From a group of 7 men and 4 women a committee of 6 persons is formed. What is the probability that the committee will consist of exactly 2 women?

(a) $\frac{5}{11}$ (b) $\frac{3}{11}$

(c) $\frac{4}{11}$ (d) $\frac{2}{11}$

24. Two numbers a and b are chosen at random from the set of first 30 natural numbers. The probability that $a^2 - b^2$ is divisible by 3 is:

(a) $\frac{37}{87}$ (b) $\frac{47}{87}$

(c) $\frac{17}{29}$ (d) None of these

25. An article manufactured by a company consists of two parts X and Y. In the process of manuifacture of the part X, 9 out of 100 parts may be defective. Similarly, 5 out of 100 are likely to be defective int he manufacture of the part. Y. Calculate the probability that the assembled product will not be defective.

(a) 0.6485 (b) 0.6565

(c) 0.8645 (d) None of these

26. If $P(A) = 3/7$, $P(B) = 1/2$ and $P(A' \cap B') = 1/14$, then are A and B are mutually exclusive events?

(a) No (b) Yes

(c) Either yes or no (d) Cannot be determined

27. One bag contains 4 white balls and 2 black balls. Another bag contains 3 white balls and 5 black balls. If one ball is drawn from each bag, determine the probability that one ball is white and another is black.

(a) 6/24 (b) 5/24

(c) 7/24 (d) 13/24

28. The probability that A can solve a problem is $\frac{2}{3}$ and B can solve it is $\frac{3}{4}$. If both attempt the problem, what is the probability that the problem gets solved?

(a) $\frac{11}{12}$ (b) $\frac{7}{12}$

(c) $\frac{5}{12}$ (d) $\frac{9}{12}$

29. Atul can hit a target 3 times in 6 shots, Bhola can hit the target 2 times in 6 shots and Chandra can hit the 4 times in 4 shots. What is the probability that at least 2 shots (out of 1 shot taken by each one of them) hit the target ?

(a) $\frac{1}{2}$ (b) $\frac{2}{3}$

(c) $\frac{1}{3}$ (d) $\frac{5}{6}$

30. Suppose six coins are tossed simultaneously. Then the probability of getting at least one tail is :

(a) $\frac{71}{72}$ (b) $\frac{53}{54}$

(c) $\frac{63}{64}$ (d) $\frac{1}{12}$

31. Seven digits from the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9 are written in a random order. The probability that this seven digit number is divisible by 9 is

(a) $\frac{2}{9}$ (b) $\frac{7}{36}$

(c) $\frac{1}{9}$ (d) $\frac{7}{12}$

32. A committee of 5 Students is to be chosen from 6 boys and 4 girls. Find the probability that the committee contains exactly 2 girls.

(a) 10/21 (b) 11/21

(c) 12/21 (d) 13/21

33. 4 gentlemen and 4 ladies take seats at random round a table. The probability that they are sitting alternately is

(a) 4/35 (b) 1/70

(c) 2/35 (d) 1/35

34. Two cards are drawn one by one from a pack of cards. The probability of getting first card an ace and second a coloured one is (before drawing second card, first card is not placed again in the pack) :

(a) 1/26 (b) 5/52

(c) 5/221 (d) 4/13

35. Seven people seat themselves indiscriminately at round table. The probability that two distinguished persons will be next to each other is

(a) $\frac{1}{3}$ (b) $\frac{1}{2}$

(c) $\frac{1}{4}$ (d) $\frac{2}{3}$

36. Let $0 < P(A) < 1, 0 < P(B) < 1$ and $P(A \cup B) = P(A) + P(B) - P(A)P(B)$, then :

(a) $P(B / A) = P(B) - P(A)$

(b) $P(A' \cup B') = P(A') + P(B')$

(c) $P(A \cap B) = P(A')P(B')$

(d) None of these

37. Eleven books, consisting of five Engineering books, four Mathematics books and two Physics books, are arranged in a shelf at random. What is the probability that the books of each kind are all together?

(a) $\frac{5}{1155}$ (b) $\frac{2}{1155}$

(c) $\frac{3}{1155}$ (d) $\frac{1}{1155}$

38. 12 persons are seated around a round table. What is the probability that two particular persons sit together?

(a) $\frac{2}{11}$ (b) $\frac{1}{6}$

(c) $\frac{3}{11}$ (d) $\frac{3}{15}$

39. Two small squares on a chess board are choosen at random. Find the probability that they have a common side:

(a) $\frac{1}{12}$ (b) $\frac{1}{18}$

(c) $\frac{2}{15}$ (d) $\frac{3}{14}$

40. A bag contains 7 blue balls and 5 yellow balls. If two balls are selected at random, what is the probability that **none** is yellow? [*SBI PO-2013*]

(a) $\frac{5}{35}$ (b) $\frac{5}{22}$

(c) $\frac{7}{22}$ (d) $\frac{7}{33}$

(e) $\frac{7}{66}$

41. A die is thrown twice. What is the probability of getting a sum 7 from both the throws? [*SBI PO-2013*]

(a) $\frac{5}{18}$ (b) $\frac{1}{18}$

(c) $\frac{1}{9}$ (d) $\frac{1}{6}$

(e) $\frac{5}{36}$

DIRECTIONS (Qs. 42-46) : ***Study the given information carefully to answer the questions that follow.***

An urn contains 4 green, 5 blue, 2 red and 3 yellow marbles.

42. If four marbles are drawn at random, what is the probability that two are blue and two are red? [*IBPS-PO-2011*]

(a) $\frac{10}{1001}$ (b) $\frac{9}{14}$

(c) $\frac{17}{364}$ (d) $\frac{2}{7}$

(e) None of these

43. If eight marbles are drawn at random, what is the probability that there are equal number of marbles of each colour ? [*IBPS-PO-2011*]

(a) $\frac{4}{7}$ (b) $\frac{361}{728}$

(c) $\frac{60}{1001}$ (d) $\frac{1}{1}$

(e) None of these

44. If two marbles are drawn at random, what is the probability that both are red or at least one is red ? [*IBPS-PO-2011*]

(a) $\frac{26}{91}$ (b) $\frac{1}{7}$

(c) $\frac{199}{364}$ (d) $\frac{133}{191}$

(e) None of these

45. If three marbles are drawn at random, what is the probability that at least one is yellow ? [*IBPS-PO-2011*]

(a) $\frac{1}{3}$ (b) $\frac{199}{364}$

(c) $\frac{165}{364}$ (d) $\frac{3}{11}$

(e) None of these

46. If three marbles are drawn at random, what is the probability that none is green ? [*IBPS-PO-2011*]

(a) $\frac{2}{7}$ (b) $\frac{253}{728}$

(c) $\frac{10}{21}$ (d) $\frac{14}{91}$

(e) None of these