Probability

Practice Exercise

1) A bag contains 12 balls which are numbered 1 to 12. If a ball is selected at random, then what is the probability that the number on the ball will be a multiple of 5 or 6?

a) 0.25 b) 0.30 c) 0.20 d) 0.33

2) A box contains 100 cards numbered 1 to 100. One card is drawn at random from the box. Find the probability that the number is neither divisible by 4 nor 7?

a) $\frac{9}{25}$ b) $\frac{16}{25}$ c) $\frac{33}{100}$ d) $\frac{39}{100}$

3) A number is chosen at random from the first 120 natural numbers. The probability of the number chosen being a multiple of 5 or 10 is:

a) $\frac{1}{5}$ b) $\frac{1}{6}$ c) $\frac{1}{7}$ d) $\frac{1}{9}$

4) Out of all the two-digit number from 1 to 60, a two-digit number is drawn at random, what is the probability that the number is not divisible by 6?

a) $\frac{1}{100}$ b) $\frac{2}{99}$ c) $\frac{3}{17}$ d) $\frac{14}{17}$

5) From the number 1 to 50, three numbers are picked at random, what is the probability that the product of the numbers is odd?

a) $\frac{1}{100}$ b) $\frac{2}{99}$ c) $\frac{3}{50}$ d) $\frac{23}{196}$

6) A box contains 25 cards numbered 1 to 25. Three card is drawn at random from the box. Find the probability that the numbers are not consecutive?

a) $\frac{1}{100}$ b) $\frac{2}{99}$ c) $\frac{98}{99}$ d) $\frac{99}{100}$

7) A box contains 8 slips numbered 1 to 8. Three slips are drawn simultaneously at random from the box. If the numbers obtained are arranged in an order, then find the probability that the number form an arithmetic progression:

a) $\frac{10}{8c3}$ b) $\frac{12}{8c3}$ c) $\frac{9}{8c3}$ d) None of these

8) There are 100 cards numbered from 1 to 100. If three cards are selected at random and with replacement, what is the probability that the sum of the three numbers on the cards so selected will be odd?

a) $\frac{1}{4}$ b) $\frac{3}{8}$ c) $\frac{1}{2}$ d) $\frac{5}{8}$

9) If X is to be chosen at random from the set (1, 2, 3, 4) and Y is to be chosen at random from the set (5, 6, 7) what is the probability that XY will be even?

a) $\frac{1}{6}$ b) $\frac{1}{3}$ c) $\frac{1}{2}$ d) $\frac{2}{3}$

10) A single die with six faces numbered 1 through 6 is thrown twice. If the numeral that faces upward as the result of each throw is recorded, what is the probability that the sum of two numbers is less than 10?

a) $\frac{5}{6}$ b) $\frac{2}{3}$ c) $\frac{1}{2}$ d) $\frac{1}{3}$

11) Two dices are thrown together. What is the probability of getting a total of at least 6?

a) $\frac{1}{3}$ b) $\frac{1}{2}$ c) $\frac{2}{3}$ d) $\frac{13}{18}$

12) Two dices are rolled simultaneously. What is the probability that their sum is a multiple of 4 or 5?

a) $\frac{4}{9}$ b) $\frac{1}{2}$ c) $\frac{17}{36}$ d) $\frac{1}{3}$

13) In a defective six- sided dice, the probability of getting an odd number is twice the probability of getting an even number. What is the probability of getting 5 in a single throw?

a) $\frac{1}{18}$ b) $\frac{1}{9}$ c) $\frac{2}{9}$ d) $\frac{1}{2}$

14) A 6-sided die with faces numbered one through six is rolled twice. What is the probability that the face with the number 2 on it will not be facing upward on either roll?

a) $\frac{1}{6}$ b) $\frac{2}{3}$ c) $\frac{25}{36}$ d) $\frac{17}{18}$

Directions for the questions: [15-17]

Two persons L and M decided to meet between 5 pm and 6 pm. The person who comes first will wait for the other for not more than 15 minutes

15) If L arrives the place at 5:10, what is the probability that they can meet?

a) $\frac{5}{11}$ b) $\frac{6}{11}$ c) $\frac{5}{12}$ d) $\frac{5}{13}$

16) If M arrives the place at 5:15, what is the probability that they can meet?

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

17) What is the probability that they can meet?

a) $\frac{9}{16}$ b) $\frac{5}{16}$ c) $\frac{7}{16}$ d) $\frac{9}{16}$

18) What is the probability that a leap year selected at random has 53 Sundays? ***[TCS]***

a) $\frac{6}{7}$ b) $\frac{1}{7}$ c) $\frac{2}{7}$ d) 1

19) Two cards are drawn at random from a pack of 52 playing cards. Find the probability of getting all the two cards are honoured cards.

a) $\frac{15}{221}$ b) $\frac{14}{221}$ c) $\frac{20}{221}$ d) $\frac{4}{52}$

19) Three cards are drawn from a well-shuffled pack of 52 cards. Find the probability that they are a king, a queen and a jack

a) $\frac{64}{5525}$ b) $\frac{64}{5225}$ c) $\frac{16}{5525}$ d) $\frac{25}{5525}$

20) Four cards are picked from the pack of 52 cards. If the first 2 cards are kings. What is the probability that the third card is king?

a) $\frac{2}{51}$ b) $\frac{2}{50}$ c) $\frac{3}{50}$ d) $\frac{3}{48}$

21) In a stock of 13 washing machines contains 5 defective ones, three washing machines are selected at random from the stock. What is the probability that only one is defective?

a) $\frac{8}{49}$ b) $\frac{2}{45}$ c) $\frac{70}{143}$ d) $\frac{7}{49}$

22) 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 4 men?

a) $\frac{3}{11}$ b) $\frac{2}{11}$ c) $\frac{6}{11}$ d) $\frac{5}{11}$

23) A bag contains 3 red, 4 white and 7 black balls. Two balls are drawn at random, find the probability both are black?

a) $\frac{1}{7}$ b) $\frac{2}{7}$ c) $\frac{3}{13}$ d) $\frac{13}{40}$

24) A bag contains 4 white and 2 red marbles. Another bag contains 3 black and 3 red marbles. John picks up a bag and a marble from it at random, calculate the probability that John picks up a red marble?

a) $\frac{3}{4}$ b) $\frac{5}{12}$ c) $\frac{5}{6}$ d) $\frac{7}{12}$

Directions for the questions [25 – 26]:

A bag contains 5 red balls and 4 black balls. When two balls are drawn, find the probability of getting both red balls.

25) With replacement?

a) $\frac{5}{81}$ b) $\frac{25}{9}$ c) $\frac{5}{9}$ d) $\frac{25}{81}$

26) Without replacement?

a) $\frac{5}{18}$ b) $\frac{5}{9}$ c) $\frac{5}{81}$ d) $\frac{25}{81}$

27) In a group of 8 persons, what is the probability that at least two of them are born on the same day of the week?

a) $\frac{1}{8}$ b) $\frac{1}{7}$ c) $\frac{1}{4}$ d) $\frac{1}{2}$

Directions for the questions [28 – 30]:

Three mountaineers Akil, Dikil and Sunil are climbing up a mountain with their respective probability of reaching the summit being $\frac{2}{3}$, $\frac{5}{8}$ and $\frac{4}{7}$ respectively. What is the probability that

28) None of them reach the summit?

a) $\frac{1}{14}$ b) $\frac{3}{56}$ c) $\frac{5}{56}$ d) $\frac{3}{14}$

29) Exactly two of them reaches the summit?

a) $\frac{37}{84}$ b) $\frac{5}{12}$ c) $\frac{19}{28}$ d) $\frac{6}{17}$

30) Atleast two of them reaches the summit?

a) $\frac{5}{21}$ b) $\frac{3}{56}$ c) $\frac{37}{84}$ d) $\frac{19}{28}$

31) A and B picks a card at random from a well shuffled cards, one after the other replacing if every time till one of them gets a diamond card. If A begins the game, then the probability that B wins the game?

a) $\frac{5}{9}$ b) $\frac{3}{7}$ c) $\frac{4}{9}$ d) $\frac{4}{7}$

32) A bag contains 6 red and 4 blue balls. 2 balls are drawn one by one without replacement. What is the probability that the balls are alternately of different colours?

a) $\frac{8}{15}$ b) $\frac{2}{15}$ c) $\frac{4}{15}$ d) $\frac{9}{15}$

33) A team of 11 football players is formed from 6 forward players, 3 goalkeepers and 4 midfielders. A team is chosen at random. Then what is the probability that the selected team contains at least 3 midfielders and 2 goalkeepers?

a) $\frac{11}{13}$ b) $\frac{3}{26}$ c) $\frac{2}{13}$ d) $\frac{23}{26}$

34) One card is drawn at random from a well-shuffled pack of cards. What is the probability that the card drawn is either a black or an ace?

a) $\frac{29}{52}$ b) $\frac{15}{26}$ c) $\frac{6}{13}$ d) $\frac{7}{13}$

35) A book has pages numbered from 1 to 100. What is the probability that a page selected at random is a perfect square?

a) $\frac{1}{100}$ b) $\frac{2}{25}$ c) $\frac{1}{10}$ d) $\frac{9}{10}$

Check the Answers

1	**D**	6	**D**	11	**D**	16	**A**	21	**C**	26	**A**	31	**C**
2	**B**	7	**B**	12	**A**	17	**C**	22	**D**	27	**B**	32	**A**
3	**A**	8	**A**	13	**C**	18	**C**	23	**C**	28	**B**	33	**D**
4	**D**	9	**D**	14	**C**	19	**C**	24	**D**	29	**A**	34	**D**
5	**D**	10	**A**	15	**C**	20	**B**	25	**D**	30	**D**	35	**C**