**Half mark and one-mark questions**

1. When a die is rolled once unbiased, what is the probability of getting a multiple of 3 out of possible outcomes?
2. The probability of an event is always lies in between 0 and 1? (0 and 1 inclusive) Why?
3. Find the probability of getting a sum of the numbers on them is 7, when two dies are rolled?
4. Find the probability of getting a number, when a card drawn at random from the numbered cards from 1 to 25?
5. From the first 50 natural numbers, find the probability of randomly selected number is a multiple of 3?
6. A dice is thrown once. Find the probability of getting a composite number?
7. What is the probability of getting exactly 2 heads, when three coins are tossed simultaneously?
8. When a dice is rolled, find the probability of getting on odd prime number?
9. From English alphabet if a letter is chosen at random, then find the probability that the letter is a consonant?
10. Write two examples of equally likely events?
11. If P(E) = 0.547 then find the probability of ‘not E’?
12. What is the probability of getting a vowel from the word ‘MATHEMATICS’?
13. Is probability of an event? Justify your answer?
14. Find the probability of getting 53 Sundays in a leap year?
15. For what value of ‘x’, may be possible probability of an event?
16. You are writing a test of 40 objective type questions. Each question carries 1 mark. What is the probability of marks you may get to be in multiple of 4?
17. Is getting tail, complementary to getting a head when a coin tossed? Give reason?
18. A = {x/ x is a prime number, 0 < x < 25}. Find the probability to select a number from the set A is an even number?
19. Let A and B be two events on the same sample space with P(A)=0.6 and P(B)=0.7. Can these two events be disjoint?
20. A family has two children. Find the probability that both children are girls given that at least one of them is a girl.
21. In a lottery, there are ten prizes and 25 blanks. A lottery is drawn at random, what is the probability of getting a prize.
22. Two dice are thrown simultaneously. What is the probability of getting two numbers whose product is even?
23. What is the sum of probabilities of happening an event and not happening the event?
24. Sam and John are playing a tennis match. If the probability of sam’s win is 0.59 then find the probability of john’s win?
25. In a cricket match, a batsman hits a boundary six times out of 30 balls he plays. Find the probability that he didn’t hit a boundary?

**Two mark questions**

1. There are 12 red balls, 18 blue balls and 6 white balls in a box. When a ball is drawn at random from the box, what is the probability of not getting a red ball?
2. When a card is drawn from a well shuffled deck of cards, then find the probability of ‘not getting a red face card’?

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| --- | --- | --- | --- | --- |
| Blood group | A | B | AB | O |
| Number of students | 10 | 13 | 12 | 5 |

1. From the following data, find the probability of selecting ‘B’ blood group student.
2. What is the probability of a number picked from first 20 natural numbers is even composite number?
3. A bag contains cards numbered from 1 to 50. A card is drawn at random from the bag. Find the probability that it bears two digit number which is multiple of 7?
4. One card is drawn from a well shuffled deck of cards. Find the probability of getting (a) an ace (b) a red king (c) a red card with prime number (d) a prime number on it?
5. There are 5 cards in a box with numbers 1 to 5 written on them. If 2 cards are picked out from the box, write all the possible outcomes and find the probability of getting both even numbers?
6. Sarada and Himaja are friends. What is the probability that both will have (a) difference birthdays (b) the same birthday?
7. A student must take one trigonometric function to solve a problem. What is the probability to take a function which has hypotenuse in its ratio?
8. If a number x is chosen at random from the numbers -2, -1, 0, 1, and 2. What is the probability that x² < 2?
9. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is multiple of 3 or 5?

**Four mark questions**

1. There are 100 flash cards labeled from 1 to 100 in a bag. When a card is drawn from the bag at random, what is the probability of getting
2. A card with prime number from possible outcomes
3. A card without prime number from possible outcomes.
4. A shopkeeper has 100 memory cards in a box. Among them, 15 memory cards are defective. When a person came to the shop to buy a memory card, the shopkeeper drew a memory card at random from the box. Then
5. What is the probability that this memory card is defective?
6. After drawing the first memory card which is defective, it is not placed back in the box. Then another memory card is drawn at random. What is the probability that this memory card is not defective?
7. Two dice are rolled at same time and the sum of the numbers appearing on them is noted. Find the probability of getting each sum, from 3 to 5 separately?
8. If two dice are thrown at the same time, find the probability of getting sum of the dots on top is prime?
9. The following table gives the ages of people in the audience at a movie theatre. Each person was given a serial number and a person was selected randomly for the bumper prize by choosing a serial number. Now find the probability of each event.

|  |  |  |
| --- | --- | --- |
| Age | Male | Female |
| Under 2 | 3 | 5 |
| 3 – 10 years | 24 | 35 |
| 11 – 16 years | 42 | 53 |
| 17 – 40 years | 121 | 97 |
| 41 – 60 years | 51 | 43 |
| Above 60 | 18 | 13 |

The total number of audience is 505. Find the probability of each of the following events:

1. The probability of audience of age less than or equal to 10 years
2. The probability of female audience of age 16 years or younger
3. The probability of audience of age above 40 years
4. The probability of the person watching the movie is not male?
5. What is the probability that a randomly thrown dart that hits the square board in shaded region? (Express the answer in percentage).
6. Find the probability of each event when a die is roll once?
7. Getting a number that is factor of 6
8. Getting a number more than 7 on the top face
9. Getting a number which is multiple of 3
10. Getting a composite number.