Chapter 06
Total-(5*10) Marks

1. Two dice are thrown simultaneously. Find the probability that two of them show the different face.

2. A number X is chosen at random from the numbers -3, -2, -1, 0, 1, 2, 3. What is the probability that $|X| > 2$?

3. What is the conditional probability that a randomly generated bit string of length 4 contains at least two consecutive 0s, given that the first bit is a 1? (Assume the probabilities of a 0 and a 1 are the same)

4. A group of six people play the game of "odd person out" to determine who will buy refreshments. Each person flips a fair coin. If there is a person whose outcome is not the same as that of any other member of the group, this person has to buy the refreshments. What is the probability that there is an odd person out after the coins are flipped once?

5. A school survey found that 9 out of 10 students like pizza. If three students are chosen at random with replacement, what is the probability that all three students like pizza?

6. Two dies are rolled, find the probability that the sum is "equal to 1" ?

7. A die is rolled and a coin is tossed, find the probability that the die shows an odd number and the coin shows a head.

8. You toss a fair coin three times. Given that you have observed at least one tails, what is the probability that you observe at least two heads?

9. A jar contains 3 red, 5 green, 2 blue and 6 yellow marbles. A marble is chosen at random from the jar. After replacing it, a second marble is chosen. What is the probability of choosing a green and then a yellow marble?

10. Two dies are rolled, find the probability that the sum is "less than 13" ?