Maths 10th Probability Paper 1

Total Time: 1 Hour **Total Marks:** 30

General Instructions:
1. All questions are **compulsory**.
2. There is no choice in any of the questions.
3. Question number **1** in **2** Section A is of one-mark question.
4. Question numbers **3** to **6** in Section A are two-mark questions.
5. Question numbers **7** to **10** in Section A are three-mark questions.
6. Question numbers **11** to **12** in Section A are four-mark questions.

Question 1. A bag contains 3 red and 5 black balls. A ball is drawn at random from the bag. What is the probability that the drawn ball is not red?

Question 2. A number is chosen at random from the numbers -3,-2,-1,0,1,2,3. What will be the probability that square of this number is less than or equal to 1?

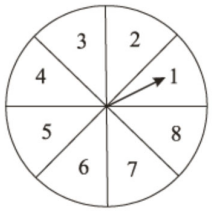
Question 3. An integer is chosen at random between 1 and 100. Find the probability that it is :
(i) divisible by 8.
(ii) not divisible by 8.

Question 4. Two different dice are tossed together. Find the probability :
(i) of getting a doublet
(ii) of getting a sum 10, of the numbers on the two dice.

Question 5. A card is drawn at random from a well shuffled pack of 52 playing cards. Find the probability of getting neither a red card nor a queen.

Question 6. A lot consists of 144 ball pens of which 20 are defective. The customer will buy a ball pen if it is good, but will not buy a defective ball pen. The shopkeeper draws one pen at random from the lot and gives it to the customer. What is the probability that
(i) customer will buy the ball pen
(ii) customer will not buy the ball pen

Question 7. A game of chance consists of spinning an arrow on a circular board, divided into 8 equal parts, which comes to rest pointing at one of the numbers 1, 2, 3, ..., 8 which are equally likely outcomes. What is the probability that the arrow will point at



(i) an odd number
(ii) a number greater than 3
(iii) a number less than 9.

Question 8. A game consists of tossing a one-rupee coin 3 times and noting the outcome each time. Ramesh wins the game if all the tosses give the same result (i.e. three heads or three tails) and loses otherwise. Find the probability of Ramesh losing the game.

Question 9. Two different dice are thrown together. Find the probability that the numbers obtained
(i) have a sum less than 7
(ii) have a product less than 16
(iii) is a doublet of odd numbers.

Question 10. A box contains cards, number from 1 to 90. A card is drawn at random from the box. Find the probability that the selected card bears a
(i) two digit number.
(ii) perfect square number.

Question 11. The King, Queen and Jack of clubs are removed from a pack of 52 cards and then the remaining cards are well shuffled. A card is selected from the remaining cards. Find the probability of getting a card
(i) of spade
(ii) of black king
(iii) of club
(iv) of jacks

Question 12. A box contains cards numbered from 1 to 20. A card is drawn at random from the box. Find the probability that number on the drawn card is
(i) a prime number
(ii) a composite number
(iii) a number divisible by 3