Maths 10th Probability Paper 2

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

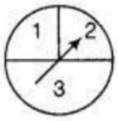
General Instructions:
1. All questions are **compulsory**.
2. There is no choice in any of the questions.
3. Question number **1** in **2** Section A is of one-mark question.
4. Question numbers **3** to **6** in Section A are two-mark questions.
5. Question numbers **7** to **10** in Section A are three-mark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

Question 1. Letter "A" is chosen at random from the letters of the word "ASSASSINATION". The probability that the letter chosen has

A) 6/13 B) 7/13 C) 1 D) none of these.

Question 2. The probability that a leap you selected at random will contains 53 Sunday is

(a) 1/7 (b) 2/7 (c) 3/7 (d) 5/7



Question 3. A game consists of spinning an arrow which comes to rest pointing at one of the regions (1, 2 or 3) (see figure). Are the outcomes 1, 2 and 3 equally likely to occur? Give reasons.

Question 4. What is the probability that two different friends have different birthdays? (Ignoring leap year).

Question 5. Two dice are thrown at the same time and the product of numbers appearing on them is noted. Find the probability that the product is less than 9.

Question 6. A carton of 24 bulbs contain 6 defective bulbs. One bulb is drawn at random. What is the probability that the bulb is not defective? If the bulb selected is defective and it is not replaced and a second bulb is selected at random from the rest, what is the probability that the second bulb is defective?

Question 7. A bag contains 5 red balls and some blue balls. If the probability of drawing a blue ball from the bag is thrice that of a red ball, find the number of blue balls in the bag.

Question 8. All the jacks, queen and kings are removed from a deck of 52 playing cards. The remaining cards are well shuffled and then one card is drawn at random. Giving ace a value 1 similar value for other cards, find the probability that the card has a value.

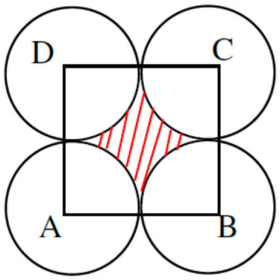
(i) 7 (ii) greater than 7 (iii) Less than 7

Question 9. At a fete, cards bearing numbers 1 to 1000, one number on one card, are put in a box. Each player selects one card at random and that card is not replaced. If the selected card has a perfect square greater than 500, the player wins a prize. What is the probability that

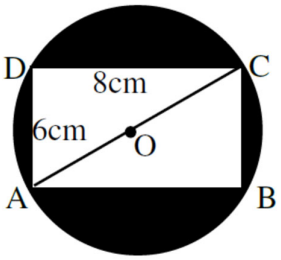
(i) the first player wins a prize?

(ii) the second player wins a prize, if the first has won?

Question 10. In the adjoining figure points A, B, C and D are the centers of four circles, each having a radius of 1 unit. If a point is chosen at random from the interior of a square ABCD, what is the probability that the point will be chosen from the shaded region.



Question 11. In the adjoining figure a dart is thrown at the dart board and lands in the interior of the circle. What is the probability that the dart will land in the shaded region.



Question 12. In the adjoining figure ABCD is a square with sides of length 6 units points P & Q are the mid points of the sides BC & CD respectively. If a point is selected at random from the interior of the square what is the probability that the point will be chosen from the interior of the triangle APQ.