PROBABILITY

1.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 a multiple of 3 or 5?

a.1/2 b.2/5 c.8/15 d.9/20

2. What is the probability of getting a sum 9 from two throws of a dice?

a.1/6 b.1/8 c.1/9 d.1/12

3.Three unbiased coins are tossed. What is the probability of getting at most two heads?

a.3/4 b.1/4 c.3/8 d.7/8

4. A card is drawn from a pack of 52 cards. The probability of getting a queen of club or a king of heart is:

a.1/13 b.2/13 c.1/26 d.1/52

5. A bag contains 4 white, 5 red and 6 blue balls. Three balls are drawn at random from the bag. The probability that all of them are red, is:

a.1/22 b.3/22 c.2/91 d.2/77

6. A tyre manufacturing company kept a record of the distance covered before a tyre needed to be replaced. The table shows the results of 1000 cases.

Distance(in km)	Less than 4000	4000 to 9000	9001 to 14000	More than 14000
Frequency	20	210	325	445

If a tyre is bought from this company, what is the probability that :

(i) it has to be substituted before 4000 km is covered?

(ii) it will last more than 9000 km?

(iii) it has to be replaced after 4000 km and 14000 km is covered by it?

7.In an enquiry of 2 members A and B,The probability of A speaking the truth is 2/3.And the probability of B speaking false is 3/5.What is the probability of :

a.Both speaking the truth.

b.Both speaking false.

c.Both giving same answer.

d.Both giving different answer.

8. Consider the experiment of rolling a die. Let A be the event 'getting a prime number', B be the event 'getting an odd number'. Write the sets representing the events

(i) Aor B

(ii) A and B

(iii) A but not B

(iv) 'not A'.

Solution: S = {1, 2, 3, 4, 5, 6}, A = {2, 3, 5} and B = {1, 3, 5}

(i) A or B = A ∪ B = {1, 2, 3, 5}

(ii) A and B = A ∩ B = {3,5}

(iii) A but not B = A – B = {2}

(iv) not A = A' = {1,4,6}

9. Out of 17 applicants, there are 8 boys and 9 girls. Two persons are to be selected for the job. Find the probability that at least one of the selected persons will be a girl.

a.25/34 b.19/34 c.21/34 d.27/34

10. What is the probability that in the rearrangements of the word AMAZED, the letter 'E' is positioned in between the 2 'A's ?

a.1/6 b.1/4 c.1/3 d.1/5

PROBABILITY ON CARDS

11.A card is drawn from a deck of 52 cards. what is the probability that it will be a :

a)Black cards b)Red cards c)Red or black cards d)king e)queen f)jack g)spades h)king or queen i)king or spades(...-1) j)king and spade k)special cards l)face cards

12. Two cards are drawn at random , what is the probability that:

a)Both are kings b)Both are queens c)Both are clubs d)one is king and other is queen. e)one is heart and the other is diamond f)either both are kings or queens g)neither kings nor queens h)only one is special card.

Problems on balls

13.A bag contains 5 red and 3 green balls,;two balls are picked at random ,what is the probability that :

a)one is red and one is green.

b)both are green.

c)both are of same colour.

d)none is green

14.what is the probability of getting 57 Sundays in a leap year?

15.what is the probability that a leap year selected at random contains 53 Sundays is :?

16. A bag contains 2 red roses,3 yellow roses, and 6 pink roses. Two roses are drawn at random,what is the probability that they are not same colour:?