

BHARATH COACHING CENTRE

10th CBSE

Probability

Total: 50

Maths

Time: 1.30hrs

Section A

5 X 1 = 5

1. What is the probability that a leap year selected at random will contain 53 Thursdays.
2. In a single throw of two dice, what is the probability of getting the product of numbers on the dice as 20?
3. A girl calculates that the probability of her winning the prize in a lottery is 0.08. If 6000 tickets are sold, how many tickets has she bought?
4. In a single throw of two dice, what is the probability of getting a total of 9?
5. If $P(A)$ denotes probability of an event A, then what is the minimum & maximum value of $P(A)$?

Section B

5 X 2 = 10

6. A person is given a choice to choose last digit of his mobile number from digits 0, 2, 3, 4, 5, 7. Find the probability that he has not chosen the last digit as 4.
7. Two dice are thrown at the same time. Find the probability that the sum of two numbers appearing on the top of the dice is greater than 6 but less than 9.
8. Three coins are tossed simultaneously. Find the probability of getting at least two heads.
9. A bag contains 18 balls, out of which x balls are red & rest are white. If one ball is drawn at random,
 - a) What is the probability that it is a red ball?
 - b) How many white balls are there, if probability of drawing a white ball is $\frac{1}{3}$?
10. A child has a block in the shape of a cube with one letter or digit written on each face as shown below:

1	4	C	6	8	D
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The cube is thrown once. Find the probability of getting:
 - a) a multiple of 4.
 - b) D

Section C

5 X 3 = 15

11. Three unbiased coins are tossed together. What is the probability of getting a) two heads, b) at least two heads, c) at most two heads?
12. A bag contains 4 white balls, 6 red balls, 7 black balls & 3 blue balls. One ball is drawn at random from the bag. Find the probability that the ball drawn is:
 - i) White
 - ii) Not black
 - iii) Neither white nor black
13. In a survey, it was found that 40% people use petrol, 35% use diesel & remaining use CNG for their vehicles. Find the probability that the person chosen uses CNG. Which fuel is more appropriate for use?
14. A box contains 90 discs, which are numbered from 5 to 94. If one disc is drawn at random from the box, find the probability that it bears:
 - i) a two digit number
 - ii) a perfect square number
 - iii) a number divisible by 7
 - iv) a number which is divisible by 10.
15. In a locality, 28 children out of 35 worked for making their area clean & green. What is the probability that a child selected at random, worked for the society?

- a) Which social values are being reflected here?
- b) What does the values of the ratio tell us about the children of this locality?

Section D

$$5 \times 4 = 20$$

- 16. Two coins are tossed simultaneously. Find the probability of getting:
 - i) At least one head.
 - ii) Atmost two tails
- 17. One card is drawn from a well – shuffled deck of 52 playing cards. Find the probability of getting:
 - i) a king of red colour
 - ii) a face card
 - iii) a ten
 - iv) either a spade or an ace
- 18. In a class of 40 students, there are 16 girls & 24 boys. Out of these, ten are 'A' students & four of these students are girls. If a student is chosen at random, what is the probability of:
 - i) Choosing a girl?
 - ii) Choosing an 'A' student?
 - iii) Choosing a boy?
 - iv) Choosing a boy student who is an 'A' student?
- 19. A die is thrown once. Find the probability of getting:
 - a) an even number
 - b) a number greater than 3
 - c) a number between 3 & 6
 - d) a prime number
- 20. Sum of digits of a 2 digit number is 10.
 - a) Write the numbers
 - b) Find the probability that such a number is divisible by 3
 - c) Find the probability that such a number is composite
 - d) Find the probability that such a number is even.