LEVEL – I

1. Determine the probability that a digit chosen at random from the digits 1, 2, 3, …12 will be odd.
A. 1/2 B. 1/9 C. 5/9 D. 4/9

2. A dice is thrown, what is the probability that the number obtained is a prime number.
A. 1/6 B. 1/8 C. 1/2 D. 1/3

3. A card is drawn from a pack of 52 cards. What is the probability that the card is a Queen?
A. 1/52 B. 1/4 C. 1/16 D. None of these

4. Determine the probability that a number chosen at random from the digits 1, 2, 3, ……., 10 will be a multiple of 4.
A. 1/4 B. 1/3 C. 1/5 D. 1/2

5. Two brother X and Y appeared for an exam. Let A be the event that X is selected and B is the event that Y is selected. The probability of A is 1/7 and that of B is 2/9. Find the probability that both of them are selected.
A. 1/63 B. 2/35 C. 2/63 D. 9/14

6. Determine the probability that a digit chosen at random from digits 1, 2, 3, ….. 13 will be even.
A. 1/2 B. 1/9 C. 5/9 D. 6/13

7. A coin is tossed four times, if H = head and T = tail, what is the probability of the tosses coming up in the order HTHH?
A. 3/16 B. 1/16 C. 5/16 D. 7/16

8. Find the probability of throwing a total of 8 in a single throw with two dice.
A. 1/36 B. 5/36 C. 25/36 D. 12/36

9. An urn contains 6 red, 5 blue and 2 green marbles. If 2 marbles are picked at random, what is the probability that both are red?
A. 6/13 B. 5/26 C. 5/13 D. 7/26

10. Four dice are thrown simultaneously. Find the probability that all of them show the same face.
A. 1/216 B. 1/36 C. 4/216 D. 3/216

11. Two dice are thrown, what is the probability that both the dices are not having the same number.
A. 1/4 B. 5/6 C. 1/9 D. 1/12

12. A die is thrown. Let A be the event that the number obtained is greater than 3. Let B be the event that the number obtained is less than 5. Then P (AUB) is
A. 2/5 B. 3/5 C. 0 D. 1

13. A five-digit number is formed by using digits 1, 2, 3, 4 and 5 without repetition. What is the probability that the number is divisible by 4?
A. 1/5 B. 5/6 C. 4/5 D. None of these

14. A bag contains 5 red and 3 green balls. Another bag contains 4 red and 6 green balls. If one ball drawn from each bag. Find the probability that one ball is red and one is green.

A. 19/20 B. 17/20 C. 8/10 D. 21/40

15. A speaks truth in 75% of cases and B in 80% of cases. In what percent of cases are they likely to contradict each other in narrating the same event?

A. 35% B. 5% C. 45% D. 22.5%

16. A bag contains 6 white and 4 black balls .2 balls are drawn at random. Find the probability that they are of same colour.

A. 1/2 B. 7/15 C. 8/15 D. 1/9

17. In a charity show tickets numbered consecutively from 101 through 350 are placed in a box. What is the probability that a ticket selected at random (blindly) will have a number with a hundredth digit of 2?

A. 0.285 B. 0.40 C. 100/249 D. 99/250

18. A man and his wife appear in an interview for two vacancies in the same post. The probability of husband's selection is (1/7) and the probability of wife's selection is (1/5). What is the probability that only one of them is selected?

A. 2/7 B. 1/7 C. 3/4 D. 4/5

19. What is the probability of getting 53 Mondays in a leap year?

A. 1/7 B. 3/7 C. 2/7 D. 1

20. In a class, there are 15 boys and 10 girls. Three students are selected at random. The probability that 1 girl and 2 boys are selected, is:

A. 21/46 B. 1/5 C. 3/25 D. 1/50

LEVEL – II

1. Two cards are drawn in succession from a pack of 52 cards, without replacement. What is the probability, that the first is a Queen and the second is a Jack of a different suit?
A. 1/52 B. 1/13 C. 4/13 D. 1/221

2. One ticket is selected at random from 50 tickets numbered 0, 01, 02, ……, 49. Then, the probability that the sum of the digits on the selected ticket is 8, given that the product of these digits is zero equals.
A. 1/14 B. 1/7 C. 5/14 D. 1/50

3. It is given that the events A and B are such that P(A) = 1/4 , P(A|B) = 1/2 and P(B|A) = 2/3. Then P(B|A) = 2/3. Then P(B) is
A. 1/2 B. 1/6 C. 1/3 D. 2/3

4. A pair of fair dice is thrown independently three times. The probability of getting a total of exactly 9 twice is
A. 1/729 B. 8/9 C. 8/729 D. 8/243

5. A bag contains 12 white and 18 black balls. Two balls are drawn in succession without replacement. What is the probability that first is white and second is black?
A. 18/145 B. 18/29 C. 36/135 D. 36/145

6. The odds against an event are 5:3 and the odds in favour of another independent event are 7:5. Find the probability that at least one of the two events will occur.
A. 52/96 B. 69/96 C. 71/96 D. 13/96

7. If the chance that a vessel arrives safely at a port is 9/10 then what is the chance that out of 5 vessels expected at least 4 will arrive safely?
A. $14\times9^4 / 10^5$ B. $15\times9^5 / 10^4$ C. $14\times9^3 / 10^4$ D. $14\times9^6 / 10^5$

8. Derek throws three dice in a special game. If he knows that he needs 15 or higher in this throw to win, then find the chance of his winning the game.
A. 5/54 B. 17/216 C. 13/216 D. 15/216

9. An urn contains 6 red, 5 blue and 2 green marbles. If three marbles are picked at random, what is the probability that at least one is blue?
A. 28/143 B. 115/197 C. 28/197 D. 115/143

10. Four cards are drawn at random from a pack of 52 plating cards. Find the probability of getting all the four cards of the same suit.
A. 13/270725 B. 91/190 C. 178/20825 D. 44/4165

11. There are four hotels in a town. If 3 men check into the hotels in a day then what is the probability that each checks into a different hotel?
A. 6/7 B. 1/8 C. 3/8 D. 5/9

12. Two teams Arrogant and Overconfident are participating in a cricket tournament. The odds that team Arrogant will be champion is 5 to 3, and the odds that team Overconfident will be the champion is 1 to 4. What are the odds that either Arrogant or team Overconfident will become the champion?
A. 3 to 2 B. 5 to 2 C. 6 to 1 D. 33 to 7

13. A box contains 100 balls, numbered from 1 to 100. If three balls are selected at random and with replacement from the box, what is the probability that the sum of the three numbers on the balls selected from the box will be odd?
A. 1/2 B. 3/4 C. 3/8 D. 1/8

14. A bag contains 3 white balls and 2 black balls. Another bag contains 2 white and 4 black balls. A bag and a ball are picked random. The probability that the ball will be white is:
A. 7/11 B. 7/30 C. 5/11 D. 7/15

15. I forgot the last digit of a 7-digit telephone number. If 1 randomly dials the final 3 digits after correctly dialling the first four, then what is the chance of dialling the correct number?
A. 1/1001 B. 1/1000 C. 1/999 D. 1/990

16. In his wardrobe, Dexter has three trousers. One of them is black the second is blue, and the third brown. In his wardrobe, he also has four shirts. One of them is black and the other 3 are white. He opens his wardrobe in the dark and picks out one shirt and one trouser pair without examining the colour. What is the likelihood that neither the shirt nor the trouser is black?
A. 1/12 B. 1/2 C. 1/4 D. 1/6

17. A man can hit a target once in 4 shots. If he fires 4 shots in succession, what is the probability that he will hit his target?
A. 175/256 B. 1/256 C. 81/256 D. 1

18. The letters B,G,I,N and R are rearranged to form the word 'Bring'. Find its probability:
A. 1/120 B. 1/54 C. 1/24 D. 1/76

19. Abhishek has 9 pairs of dark blue socks and 9 pairs of black socks. He keeps them all in the same bag. If he picks out three socks at random, then what is the probability that he will get a matching pair?
A. 1 B. $2\times{}^{9}C_{2}\times{}^{9}C_{1} / {}^{18}C_{3}$ C. ${}^{9}C_{3}\times{}^{9}C_{1}/{}^{18}C_{3}$ D. None of these

20. Four boys and three girls stand in queue for an interview. The probability that they stand in alternate positions is:
A. 1/17 B. 1/34 C. 1/35 D. 1/68