1. The probability of a leap year selected at random contain 53 Sunday is:

(a) 53/ 366 (b) 1/7 (c) 2/7 (d) 53/365

2. A bag contains 3 red and 2 blue marbles. A marble is drawn at random. The probability of drawing a black ball is :

(a) 3/5 (b) 2/5 (c) 0/5 (d) 1/5

3. The probability that it will rain tomorrow is 0.85. What is the probability that it will not rain tomorrow

(a) 0.25 (b) 0.145 (c) 3/20 (d) none of these

4. What is the probability that a number selected from the numbers (1, 2, 3,.....,15) is a multiple of 4?

(a) 1/5 (b) 4/5 (c) 2/15 (d) 1/3

5. What are the total outcomes when we throw three coins?

(a) 4 (b) 5 (c) 8 (d) 7

6. The probability that a prime number selected at random from the numbers (1,2,3, ...35) is :

(a) 12/35 (b) 11/35 (c) 13/35 (d) none of these

7. The sum of the probability of an event and non event is :

(a) 2 (b) 1 (c) 0 (d) none of these.

8. The following probabilities are given; choose the correct answer for that which is not possible.

(a) 0.15 (b) 2/7 (c) 7/5 (d) none of these.

9. If three coins are tossed simultaneously, than the probability of getting at least two heads, is:

(a) 1/4 (b) 3/8 (c) ½ (d) 1/8

10. A letter 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.

11. A dice is thrown. Find the probability of getting an even number.

(A) 2/3 (B) 1 (C) 5/6 (D) 1/2

12. Two coins are thrown at the same time. Find the probability of getting both heads.

(A) 3/4 (B) 1/4 (C) 1/2 (D) 0

13. Two dice are thrown simultaneously. The probability of getting a sum of 9 is:

22. Riya and Kajal are friends. Probability that both will have the same birthday is the same birthday is:
(A) 364/365 (B) 31/365 (C) 1/365 (D) 1/133225

23. A number *x* is chosen at random from the numbers -2, -1, 0 , 1, 2. Then the probability that $x^2 < 2$ is?
(A) 1/5 (B) 2/5 (C) 3/5 (D) 4/5

24. A jar contains 24 marbles. Some are red and others are white. If a marble is drawn at random from the jar, the probability that it is red is 2/3, then the number of white marbles in the jar is:
(A) 10 (B) 6 (C) 8 (D) 7

25. A number is selected at random from first 50 natural numbers. Then the probability that it is a multiple of 3 and 4 is:
(A) 7/50 (B) 4/25 (C) 1/25 (D) 2/25

26. Consider a dice with the property that that probability of a face with n dots showing up is proportional to n. The probability of face showing 4 dots is?
a) $\frac{1}{7}$ b) $\frac{5}{42}$ c) $\frac{1}{21}$ d) $\frac{4}{21}$

27. Runs scored by batsman in 5 one day matches are 50, 70, 82, 93, and 20. The standard deviation is _____ .
a) 25.79 b) 25.49 c) 25.29 d) 25.69

28. Find median and mode of the messages received on 9 consecutive days 15, 11, 9, 5, 18, 4, 18, 13, 17.
a) 13, 15 b) 13, 18 c) 18, 15 d) 13, 16

29. A coin is tossed up 4 times. The probability that tails turn up in 3 cases is _____ .
a) $^1/_2$ b) $^1/_3$ c) $^1/_4$ d) $^1/_6$

30. X is a variate between 0 and 3. The value of $E(X^2)$ is _____ .
a) 8 b) 7 c) 27 d) 9

31.The random variables X and Y have variances 0.2 and 0.5 respectively. Let Z= 5X-2Y. The variance of Z is?

a) Mean is 0 and variance is 1 b) Mean is 1 and variance is 0
c) Mean is 0 and variance is ∞ d) Mean is ∞ and variance is 0

42.Variance of a random variable X is given by _____ .
a) E(X) b) E(X2) c) E(X2) – (E(X))2 d) (E(X))2

43.Mean of a random variable X is given by _____
a) E(X) b) E(X2) c) E(X2) – (E(X))2 d) (E(X))2

44.Mean of a constant 'a' is _____ .
a) 0 b) a c) a/2 d) 1

45.Variance of a constant 'a' is _____ .
a) 0 b) a c) a/2 d) 1

46.Find the mean and variance of X?

x	0	1	2	3	4
f(x)	1/9	2/9	3/9	2/9	1/9

a) 2, 4/3 b) 3, 4/3 c) 2, 2/3 d) 3, 2/3

47.Find the expectation of a random variable X?

x	0	1	2	3
f(x)	1/6	2/6	2/6	1/6

a) 0.5 b) 1.5 c) 2.5 d) 3.5

48. In a Binomial Distribution, if p, q and n are probability of success, failure and number of trials respectively then variance is given by _____ .