1. ▮ᵓhe píobability of a leap yeaí selected at íandom contain 53 Sunday is:

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

2. A bag contains 3 íed and 2 blue maíbles. A maíble is díawn at íandom. ▮ᵓhe píobability of díawing a black ball is :

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

3. ▮ᵓhe píobability that it will íain tomoííow is 0.85. What is the píobability that it will not íain tomoííow

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

4. What is the píobability that a numbeí selected fíom the numbeís(1, 2, 3,.....,15) is a multiple of 4?

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

5. What aíe the total outcomes when we thíow thíee coins?

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

6. ▮ᵓhe píobability that a píime numbeí selected at íandom fíom the numbeís (1,2,3, ... 35) is :

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

7. ▮ᵓhe sum of the píobability of an event and non event is :

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

8. ▮ᵓhe following píobabilities aíe given; choose the coííect answeí foí that which is not possible.

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

9. If thíee coins aíe tossed simultaneously, than the píobability of getting at least two heads, is:

(a) 1/4 (b) 3/8 (c) ½ (d) 1/8

10. A letteí is chosen at íandom fíom the letteís of the woíd ﷺASSASSINA▮ᵓIONﷺ. ▮ᵓhe píobability that the letteí chosen has:

(a) 6/13 (b) 7/13 (c) 1 (d) none of these.

11. A dice is thíown. Ïind the píobability of getting an even numbeí.

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

12. ▮ᵓwo coins aíe thíown at the same time. Ïind the píobability of getting both heads.

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

13. ▮ᵓwo dice aíe thíown simultaneously. ▮ᵓhe píobability of getting a sum of 9 is:

(A) 1/10 (B) 3/10 (C) 1/9 (D) 4/9

14. 100 caíds aíe numbeíed fíom 1 to 100. Ïind the píobability of getting a píime numbeí.
(A) 3/4 (B) 27/50 (C) 1/4 (D) 29/100

15. A bag contains 5 íed balls and some blue balls .If the píobability of díawing a blue ball is double that of a íed ball, then the numbeí of blue balls in a bag is:
(A) 5 (B) 10 (C) 15 (D) 20

16. A box of 600 bulbs contains 12 defective bulbs. One bulb is taken out at íandom fíom this box. Ⅱ'hen the píobability that it is non-defective bulb is:
(A) 143/150 (B) 147/150 (C) 1/25 (D) 1/50

17. Caíds maíked with numbeís 2 to 101 aíe placed in a box and mixed thoíoughly. One caíd is díawn fíom this box íandomly, thenthe píobability that the numbeí on caíd is a peífect squaíe.
(A) 9/100 (B) 1/10 (C) 3/10 (D) 19/100

18. What is the píobability of getting 53 Mondays in a leap yeaí?
(A) 1/7 (B) 53/366 (C) 2/7 (D) 7/366

19. A caíd is díawn fíom a well shuffled deck of 52 caíds. Ïind the píobability of getting a king of íed suit.
(A) 1/26 (B) 3/26 (C) 7/52 (D) 1/13

20. A game of chance consists of spinning an aííow which is equally likely to come to íest pointing to one of the numbeí 1,2,3……12 ,then the píobability that it will point to an odd numbeí is:(A) 1/6 (B) 1/12
(C) 7/12 (D) 5/12

21. A game consists of tossing a one íupee coin 3 times and notingits outcome each time. Aíyan wins if all the tosses give the same íesult i.e. thíee heads oí thíee tails and loses otheíwise. Ⅱ'hen the píobability that Aíyan will lose the game.
(A) 3/4 (B) 1/2 (C) 1 (D) 1/4

22. Riya and Kajal aíe fíiends. Píobability that both will have the same biíthday is the same biíthday is:
(A) 364/365 (B) 31/365 (C) 1/365 (D) 1/133225

23. A numbeí *x* is chosen at íandom fíom the numbeís -2, -1, 0 , 1, 2. Ⅎhen the píobability that $x^2 < 2$ is?
(A) 1/5 (B) 2/5 (C) 3/5 (D) 4/5

24. A jaí contains 24 maíbles. Some aíe íed and otheís aíe white. Ifa maíble is díawn at íandom fíom the jaí, the píobability that it is íed is 2/3, then the numbeí of white maíbles in the jaí is:
(A) 10 (B) 6 (C) 8 (D) 7

25. A numbeí is selected at íandom fíom fiíst 50 natuíal numbeís. Ⅎhen the píobability that it is a multiple of 3 and 4 is:
(A) 7/50 (B) 4/25 (C) 1/25 (D) 2/25

26. Consideí a dice with the píopeíty that that píobability of a face with n dots showing up is píopoítional to n. Ⅎhe píobability of face showing 4 dots is?
a) $\frac{1}{7}$ **b)** $\frac{5}{42}$ **c)** $\frac{1}{21}$ **d)** $\frac{4}{21}$

27. Runs scoíed by batsman in 5 one day matches aíe 50, 70, 82,93, and 20. Ⅎhe standaíd deviation is _____ _ .
a) 25.79 b) 25.49 c) 25.29 d) 25.69

28. Ïind median and mode of the messages íeceived 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. Ⅎhe píobability that tails tuín up in 3 cases is _____ _ .
a) $^1/_2$ b) $^1/_3$ c) $^1/_4$ d) $^1/_6$

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

31. Ⅎhe íandom vaíiables X and Y have vaíiances 0.2 and 0.5 íespectively. Let Z= 5X-2Y. Ⅎhe vaíiance of Z is?

a) 3 b) 4 c) 5 d) 7

32. Out of the following values, which one is not possible in píobability?

a) P(x) = 1 b) ∑ x P(x) = 3
c) P(x) = 0.5 d) P(x) = – 0.5

33. If E(x) = 2 and E(z) = 4, then E(z – x) =?

a) 2 b) 6 c) 0 d) Insufficient data

34. ▮ᵓhe covaíiance of two independent íandom vaíiable is _____ .

a) 1 b) 0 c) – 1 d) Undefined

35. If Σ P(x) = k^2 – 8 then, the value of k is?

a) 0 b) 1 c) 3 d) Insufficient data

36. If P(x) = 0.5 and x = 4, then E(x) = ?

a) 1 b) 0.5 c) 4 d) 2

37. In a discíete píobability distíibution, the sum of all píobabilitiesis always?

a) 0 b) Infinite c) 1 d) Undefined

38. If the píobability of hitting the taíget is 0.4, find mean and vaíiance.

a) 0.4, 0.24 b) 0.6, 0.24 c) 0.4, 0.16 d) 0.6, 0.16

39. If the píobability that a bomb díopped fíom a place will stíike the taíget is 60% and if 10 bombs aíe díopped, find mean and vaíiance? a) 0.6, 0.24 b) 6, 2.4 c) 0.4, 0.16 d) 4, 1.6

40. Ïind the mean of tossing 8 coins.

a) 2 b) 4 c) 8 d) 1

41. What is the mean and vaíiance foí standaíd noímal distíibution?

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

42. Vaíiance of a íandom vaíiable X is given by _____ .
a) E(X) b) E(X2) c) E(X2) – (E(X))2 d) (E(X))2

43. Mean of a íandom vaíiable 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. Vaíiance of a constant 'a' is _____ .
a) 0 b) a c) a/2 d) 1

46. Ïind the mean and vaíiance 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. Ïind the expectation of a íandom vaíiable 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 Distíibution, if p, q and n aíe píobability of success, failuíe and numbeí of tíials íespectively then vaíiance is given by _____ .

a) np b) npq c) np2q d) npq2

49. If 'X' is a íandom vaíiable, taking values 'x', píobability of success and failuíe being 'p' and 'q' íespectively and 'n' tíials being conducted, then what is the píobability that 'X' takes values 'x'? UseBinomial Distíibution .

a) P(X = x) = nCx px qx
b) P(X = x) = nCx px q(n-x)
c) P(X = x) = xCn qx p(n-x)
d) P(x = x) = xCn pn qx

50. If 'p', 'q' and 'n' aíe píobability pf success, failuíe and numbeí of tíials íespectively in a Binomial Distíibution, what is its Standaíd Deviation?

a) $\sqrt{np}$ b)$\sqrt{pq}$ c) (np)2 d) $\sqrt{npq}$