

PROBABILTY

1. A card is drawn from a well-shuffled pack of cards. The probability of getting a queen of cube or king of heart is
- (a) $\frac{1}{52}$ (b) $\frac{1}{26}$
(c) $\frac{1}{13}$ (d) $\frac{1}{56}$
2. Two cards are drawn at random from a pack of 52 cards. The probability of these two being aces is
- (a) $\frac{1}{26}$ (b) $\frac{1}{221}$
(c) $\frac{1}{2}$ (d) $\frac{1}{18}$
3. The probability of getting heads in both trials, when an unbiased coin is tossed twice, will be
- (a) $\frac{1}{4}$ (b) $\frac{1}{2}$
(c) 1 (d) $\frac{3}{4}$
4. In shuffling a pack of cards 3 are accidentally dropped, then the chance that missing card should be of different suits is
- (a) $\frac{169}{425}$ (b) $\frac{261}{425}$
(c) $\frac{104}{425}$ (d) $\frac{425}{169}$
5. Three mangoes and three apples are in box. If two fruits are chosen at random, the probability that one is a mango and the other is apple is
- (a) $\frac{2}{3}$ (b) $\frac{3}{5}$
(c) $\frac{1}{3}$ (d) $\frac{4}{5}$

6. A and B are two such that $P(A) = 0.3$ and $P(A \cup B) = 0.8$. If A and B are independent, then $P(B)$ is
- (a) $\frac{2}{3}$ (c) $\frac{3}{5}$
 (b) $\frac{1}{3}$ (d) $\frac{4}{5}$
7. A speaker truth is 60% cases and B speaks truth in 70% cases. The probability that they will say the same thing while describing single event is
- (a) 0.56 (b) 0.54
 (c) 0.38 (d) 0.94
8. A card is drawn at random from a pack of 100 cards numbered 1 to 100. The probability of drawing a number which is a square is
- (a) $\frac{1}{5}$ (c) $\frac{2}{5}$
 (b) $\frac{1}{10}$ (d) $\frac{2}{9}$
9. If there are 4 addressed and 4 letters. Then, the chance that all the letter are not mailed through proper envelope is
- (a) $\frac{1}{24}$ (b) 1
 (c) $\frac{23}{24}$ (d) $\frac{9}{2}$
10. The probability that in the toss of two dice we obtain an even sum or a sum less than 5 is
- (a) $\frac{1}{2}$ (b) $\frac{1}{6}$
 (c) $\frac{1}{3}$ (d) $\frac{5}{9}$
11. The probability of solving a problem by three students A, B and C are $\frac{1}{2}, \frac{1}{3}$ and $\frac{1}{4}$ respectively. The probability that the problem will be solved is
- (a) $\frac{1}{4}$ (b) $\frac{1}{2}$
 (c) $\frac{3}{4}$ (d) $\frac{1}{3}$

12. 8 coins are tossed simultaneously. The probability of getting at least 6 heads is

(a) $\frac{57}{64}$

(b) $\frac{229}{256}$

(c) $\frac{7}{64}$

(d) $\frac{37}{256}$

13. A draws two cards with replacement from a pack of 52 cards and B throws a pair of dice what is the chance that A gets both cards of same suit and B gets total of 6

(a) $\frac{1}{144}$

(b) $\frac{1}{4}$

(c) $\frac{5}{144}$

(d) $\frac{4}{144}$

14. In solving in any problem, odds against 'A' are 4 to 3 and odds in favour of '3' in solving the same is 7 to 5. Then, probability that problem will be solved is

(a) $\frac{5}{21}$

(b) $\frac{16}{21}$

(c) $\frac{15}{84}$

(d) $\frac{69}{84}$

15. Two players toss four coins each. The probability that both obtain the same number of heads is

(a) $\frac{5}{256}$

(b) $\frac{1}{16}$

(c) $\frac{35}{128}$

(d) $\frac{1}{225}$

16. In a binomial distribution, the occurrence and the non-occurrence of an event are equally likely and the mean is 6. The number of trials required is

(a) 15

(b) 12

(c) 10

(d) 6



17. A die is tossed twice. What is the probability of getting a sum of 10?

- (a) $\frac{1}{18}$ (b) $\frac{1}{6}$
(c) $\frac{1}{12}$ (d) $\frac{5}{12}$

18. Three dice are thrown. What is the probability of getting as triplet?

- (a) $\frac{1}{16}$ (b) $\frac{1}{18}$
(c) $\frac{1}{36}$ (d) $\frac{1}{72}$

19. What is the probability that a leap year selected at random will contain 53 Mondays?

- (a) $\frac{2}{5}$ (b) $\frac{2}{7}$
(c) $\frac{1}{7}$ (d) $\frac{5}{7}$

20. If $P(E)$ denotes the probability of an event E , then E is called certain event, if

- (a) $P(E) = 0$ (b) $P(E) = 1$
(c) $P(E)$ is either 0 or 1 (d) $P(E) = \frac{1}{2}$

21. Two letters are drawn at random from the word 'HOME'. What is the probability the both the letters are vowels?

- (a) $\frac{1}{6}$ (b) $\frac{5}{6}$
(c) $\frac{3}{5}$ (d) $\frac{1}{3}$

22. There is a point inside a circle. What is the probability that this point is close to the circumference than to the centre?

- (a) $\frac{3}{4}$ (b) $\frac{1}{2}$
(c) $\frac{1}{4}$ (d) $\frac{1}{3}$

23. In a random arrangement of the letters of the word UNIVERSITY. What is the probability that *two I's do not come together?*
- (a) $\frac{4}{5}$ (c) $\frac{1}{10}$
(b) $\frac{1}{5}$ (d) $\frac{9}{10}$
24. What is the probability of having 53 Sundays or 53 Mondays in a leap year?
- (a) $\frac{2}{5}$ (c) $\frac{1}{7}$
(b) $\frac{2}{7}$ (d) $\frac{5}{7}$
25. In how many ways can the letters of the word 'GLOOMY' be arranged so, that the two O's Should not be together?
- (a) 240 (b) 480
(c) 600 (d) 720
26. In throwing a six faced die, let *a* be the event that an even number occurs, *B* be the event that an odd number occurs and *C*, be the event that a number greater than 3 occurs. Which one of the following is correct?
- (a) *A* and *C* are mutually exclusive
(b) *A* and *B* are mutually exclusive
(c) *B* and *C* are mutually exclusive
(d) *A, B* and *C* mutually exclusive



27. Consider a random experiment of throwing together a die and a coin. The associated sample space has

- (a) 8 points (b) 12 points
(c) 24 points (d) 36 points

28. What is the probability of getting a sum of 7 with two Dice?

- (a) $\frac{1}{6}$ (b) $\frac{1}{3}$
(c) $\frac{1}{12}$ (d) $\frac{5}{36}$

29. What is the most probable number of successes in 10 trials with the probability of successes $\frac{2}{3}$?

- (a) 10 (b) 7
(c) 5 (d) 4

30. A coin is tossed 10 times. The numbers of heads minus the number of tails in 10 tosses is considered as the outcome of the experiment. What is the number of points in the sample space?

- (a) 10 (b) 11
(c) 21 (d) 99

31. The probability of two events A and B are given as $P(A) = 0.8$ and $P(B) = 0.7$. What is the minimum value of $P(A \cap B)$?

- (a) 0 (c) 0.5
(b) 0.1 (d) 1

32. The probability of guessing a correct answer is $\frac{x}{12}$. If the probability of not guessing the correct answer is $\frac{2}{3}$, then what is x equal to?

- (a) 2 (b) 3
(c) 4 (d) 6



33. A box contain 6 distinct dolls. From this box, three dolls are randomly selected one by one with replacement. What is the probability of selecting 3 distinct dolls?

(a) $\frac{5}{54}$

(b) $\frac{12}{25}$

(c) $\frac{1}{20}$

(d) $\frac{5}{9}$

34. If X follows a binomial distribution with parameters $N=100$ and $p=\frac{1}{3}$, then $p(x=r)$ is maximum when

(a) $r=16$

(b) $r=32$

(c) $r=33$

(d) $r=34$

35. Two events A and B have probability 0.25 and 0.50. The probability that both occur simultaneously is 0.14. Then, the probability that neither A nor B occur is

(a) 0.75

(b) 0.61

(c) 0.39

(d) None of these

36. If two marbles are picked randomly, then the probability that both marbles are red is

(a) $\frac{3}{7}$

(b) $\frac{1}{2}$

(c) $\frac{1}{11}$

(d) $\frac{1}{6}$

37. If three marbles are picked randomly, then the probability that either all are red or all are blue, is

(a) $\frac{7}{12}$

(b) $\frac{37}{44}$

(c) $\frac{5}{12}$

(d) $\frac{7}{44}$



38. Two numbers X and Y are simultaneously drawn from the set $\{1,2,3,4,5,6,7,8,9,10\}$. What is the conditional probability of exactly one of the two numbers X and Y being even, given $(X + Y) = 15$?
- (a) 1 (b) $\frac{3}{4}$
(c) $\frac{1}{2}$ (d) $\frac{1}{4}$
39. Of cigarette smoking population 70% are men and 30% are women, 10% of these men and 20% of these women smoke Wills. The probability that a person seen smoking a Wills to be men is
- (a) $\frac{1}{5}$ (b) $\frac{5}{13}$
(c) $\frac{7}{13}$ (d) $\frac{7}{10}$
40. If A and B are independent events such that $P(A) = \frac{1}{5}$, $P(A \cup B) = \frac{7}{10}$, then what is $P(\bar{B})$ equal to?
- (a) $\frac{2}{7}$ (b) $\frac{3}{7}$
(c) $\frac{1}{12}$ (d) $\frac{5}{12}$
41. Consider the following statements
- I. If A and B are exhaustive events, then their union is the sample space.
II. If A and B are exhaustive events, then their intersection must be an empty event.
- Which of the above statements is correct?
- (a) Only I (b) only II
(c) Both I and II (d) Neither I nor II
42. What is the number of outcomes when a coin is tossed and then a die is rolled only in case a head is shown on the coin?
- (a) 6 (c) 8
(b) 7 (d) 5

43. The binomial distribution has
- (a) Only one parameters (c) two parameters
(b) Three parameters (d) four parameters
44. A bag contain 5 black and 3 white balls. Two balls are drawn at random one after the other without replacement. What is the probability that both are white?
- (a) $\frac{1}{28}$ (c) $\frac{1}{14}$
(b) $\frac{3}{28}$ (d) $\frac{1}{21}$
45. A fair coin is tossed repeatedly. The probability of getting a result in the fifth toss different from those obtained in the first four tosses is
- (a) $\frac{1}{2}$ (c) $\frac{1}{32}$
(b) $\frac{31}{32}$ (d) $\frac{1}{16}$
46. A husband and wife appear in an interview for two vacancies in the same post. The probability of husband's selection $\frac{1}{5}$ and that of wife selection is $\frac{1}{3}$. What is the probability that only one of them will be selected?
- (a) $\frac{1}{5}$ (c) $\frac{2}{5}$
(b) $\frac{3}{5}$ (d) $\frac{4}{5}$