

Topic :-PROBABILITY

- An integer is chosen at random from first two hundred digits. Then, the probability that the integer chosen is divisible by 6 or 8, is
a) $\frac{1}{4}$ b) $\frac{2}{4}$ c) $\frac{3}{4}$ d) None of these
- For a random variable $X, E(X) = 3$ and $E(X^2) = 11$. Then, variance of X is
a) 8 b) 5 c) 2 d) 1
- A coin is tossed n times. The probability of getting head at least once is greater than 0.8, then the least value of n is
a) 2 b) 3 c) 5 d) 4
- If any four numbers are selected and they are multiplied, then the probability that the last digit will 1,3,5 or 7, is
a) $\frac{4}{625}$ b) $\frac{18}{625}$ c) $\frac{16}{625}$ d) None of these
- If A and B are two independent events such that $P(A \cap B') = \frac{3}{25}$ and $P(A' \cap B) = \frac{8}{25}$, then $P(A)$ is equal to
a) $\frac{1}{5}$ b) $\frac{3}{8}$ c) $\frac{2}{5}$ d) $\frac{4}{5}$
- If, $x \in [0,5]$, then what is the probability that $x^2 - 3x + 2 \geq 0$?
a) $\frac{4}{5}$ b) $\frac{1}{5}$ c) $\frac{2}{5}$ d) None of these
- Three coins are tossed together, then the probability of getting at least one head is
a) $\frac{1}{2}$ b) $\frac{3}{4}$ c) $\frac{1}{8}$ d) $\frac{7}{8}$
- A random variable X follows binomial distribution with mean α and variance β . Then
a) $0 < \alpha < \beta$ b) $0 < \beta < \alpha$ c) $\alpha < 0 < \beta$ d) $\beta < 0 < \alpha$
- Probability of getting positive integral roots of the equation $x^2 - n = 0$ for the integer $n, 1 \leq n \leq 40$ is
a) $\frac{1}{5}$ b) $\frac{1}{10}$ c) $\frac{3}{20}$ d) $\frac{1}{20}$
- The probability that the three cards drawn from a pack of 52 cards, are all black, is
a) $\frac{1}{17}$ b) $\frac{2}{17}$ c) $\frac{3}{17}$ d) $\frac{2}{19}$

11. Three six faced dice are tossed together, then the probability that exactly two of the three numbers are equal is
 a) $165/216$ b) $177/216$ c) $51/216$ d) $90/216$
12. If A and B are two independent events such that $P(B) = \frac{2}{7}, P(A \cup B^c) = 0.8$, then $P(A)$ is equal to
 a) 0.1 b) 0.2 c) 0.3 d) 0.4
13. An experiment yields 3 mutually exclusive and exhaustive events A, B, C . If $P(A) = 2P(B) = 3P(C)$, then $P(A)$ is equal to
 a) $\frac{1}{11}$ b) $\frac{2}{11}$ c) $\frac{3}{11}$ d) $\frac{6}{11}$
14. A random variable X takes values $0, 1, 2, 3, \dots$ with probability $P(X = x) = k(x + 1)\left(\frac{1}{5}\right)^x$, where k is constant, then $P(X = 0)$ is
 a) $\frac{7}{25}$ b) $\frac{18}{25}$ c) $\frac{13}{25}$ d) $\frac{16}{25}$
15. If A and B are two events such that $P(A \cup B) = \frac{5}{6}$, $P(A \cap B) = \frac{1}{3}$ and $P(\bar{B}) = \frac{1}{3}$, then the value of $P(A)$ is
 a) $\frac{1}{3}$ b) $\frac{1}{4}$ c) $\frac{1}{2}$ d) $\frac{2}{3}$
16. In a bag there are three tickets numbered 1, 2, 3. A ticket is drawn at random and put back, and this is done four times. The probability that the sum of the numbers is even, is
 a) $41/81$ b) $39/81$ c) $40/81$ d) None of these
17. A box contains 24 identical balls of which 12 are white and 12 are black. The balls are drawn at random from the box one at a time with replacement. The probability that a white ball is drawn for the 4th time on the 7th draw, is
 a) $\frac{5}{64}$ b) $\frac{27}{32}$ c) $\frac{5}{32}$ d) $\frac{1}{2}$
18. Out of 15 persons 10 can speak Hindi and 8 can speak English. If two persons are chosen at random, then the probability that one person speaks Hindi only and the other speaks both Hindi and English is
 a) $\frac{3}{5}$ b) $\frac{7}{12}$ c) $\frac{1}{5}$ d) $\frac{2}{5}$
19. A purse contains 4 copper and 3 silver coins. Another purse contains 6 copper and 2 silver coins. A coin is taken out from any purse, the probability that it is a silver coin, is
 a) $\frac{37}{56}$ b) $\frac{19}{56}$ c) $\frac{4}{7}$ d) $\frac{2}{3}$
20. Two dice are thrown together. If the numbers appearing on the two dice are different, then what is the probability that the sum is 6?
 a) $\frac{5}{36}$ b) $\frac{1}{6}$ c) $\frac{2}{15}$ d) None of these