

## Topic :-PROBABILITY

- The probability that the same number appear on throwing three dice simultaneously, is  
a)  $\frac{1}{6}$                       b)  $\frac{1}{36}$                       c)  $\frac{5}{36}$                       d) None of these
- If  $P(A) = P(B) = x$  and  $P(A \cap B) = P(A' \cap B') = \frac{1}{3}$ , then  $x$  is equal to  
a)  $\frac{1}{2}$                       b)  $\frac{1}{4}$                       c)  $\frac{1}{3}$                       d)  $\frac{1}{6}$
- One ticket is selected at random from 50 tickets numbered 00,01,02,...,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)  $\frac{1}{14}$                       b)  $\frac{1}{7}$                       c)  $\frac{5}{14}$                       d)  $\frac{1}{50}$
- If  $n$  integers taken at random are multiplied together, then the probability that the last digit of the product is 1,3,7 or 9, is  
a)  $\frac{2^n}{5^n}$                       b)  $\frac{4^n - 2^n}{5^n}$                       c)  $\frac{4^n}{5^n}$                       d) None of these
- Among the workers in a factory only 30% receive bonus and among those receiving bonus only 20% are skilled. The probability that a randomly selected worker is skilled and is receiving bonus is  
a) 0.03                      b) 0.02                      c) 0.06                      d) 0.015
- A box contains 10 good articles and 6 with defects, one article is chosen at random. What is the probability that it is either good or has a defect?  
a)  $\frac{24}{64}$                       b)  $\frac{40}{64}$                       c)  $\frac{49}{64}$                       d) 1
- A coin and six faced die. Both unbiased, are thrown simultaneously. The probability of getting a head on the coin and an odd number on the die, is  
a)  $\frac{1}{2}$                       b)  $\frac{3}{4}$                       c)  $\frac{1}{4}$                       d)  $\frac{2}{3}$
- An anti-aircraft gun can take a maximum of four shots at any plane moving away from it. The probabilities of hitting the plane at the 1st, 2nd, 3rd and 4th shots are 0.4, 0.3, 0.2 and 0.1 respectively. What is the probability that at least one shot hits the plane?  
a) 0.6976                      b) 0.3024                      c) 0.72                      d) 0.6431

9. A coin is tossed three times. The probability of getting head and tail alternatively, is  
 a)  $\frac{1}{8}$                                       b)  $\frac{1}{2}$                                       c)  $\frac{1}{4}$                                       d) None of these
10. A bag contains 4 tickets numbered 1,2,3,4 and another bag contains 6 tickets numbered 2,4,6,7,8,9. One bag is chosen and a ticket is drawn. The probability that the ticket bears the number 4 is  
 a)  $\frac{1}{48}$                                       b)  $\frac{1}{8}$                                       c)  $\frac{5}{24}$                                       d) None of these
11. Six coins are tossed simultaneously. The probability of getting at least 4 heads is  
 a)  $\frac{11}{64}$                                       b)  $\frac{11}{32}$                                       c)  $\frac{15}{44}$                                       d)  $\frac{21}{32}$
12. Two cards are drawn successively with replacement from a well shuffled deck of 52 cards, then the mean of the number of aces is  
 a)  $\frac{1}{13}$                                       b)  $\frac{3}{13}$                                       c)  $\frac{2}{13}$                                       d) None of these
13. Given two mutually exclusive events  $A$  and  $B$  such that  $P(A) = 0.45$  and  $P(B) = 0.35$ ,  $P(A \cap B)$  is equal to  
 a)  $\frac{63}{400}$                                       b) 0.8                                      c)  $\frac{63}{200}$                                       d) 0
14. There is an objective type question with 4 answer choices exactly one of which is correct. A student has not studied the topic on which the question has been set. The probability that the student guesses the correct answer, is  
 a)  $\frac{1}{2}$                                       b)  $\frac{1}{4}$                                       c)  $\frac{1}{8}$                                       d) None of these
15. If  $E$  and  $F$  are two independent events such that  $0 < P(E) < 1$  and  $0 < P(F) < 1$ , then  
 a)  $E$  and  $F^c$  are independent                                      b)  $E^c$  and  $F^c$  are independent  
 c)  $P\left(\frac{E}{F}\right) + P\left(\frac{E^c}{F^c}\right) = 1$                                       d) None of these
16. An integer is chosen at random from first two hundred numbers. 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
17. The mean and variance of a random variable  $X$  having a binomial distribution are 4 and 2 respectively, then  $P(X = 1)$  is  
 a)  $\frac{1}{32}$                                       b)  $\frac{1}{16}$                                       c)  $\frac{1}{8}$                                       d)  $\frac{1}{4}$
18. One hundred identical coins, each with probability  $p$  of showing heads are tossed once. If  $0 < p < 1$  and the probability of head showing on 50 coins is equal to that of head showing on 51 coins, the value of  $p$  is  
 a)  $\frac{1}{2}$                                       b)  $\frac{51}{101}$                                       c)  $\frac{49}{101}$                                       d) None of these

19. The probability of choosing a number divisible by 6 or 8 from among 1 to 90 is

a)  $\frac{1}{6}$

b)  $\frac{1}{90}$

c)  $\frac{1}{30}$

d)  $\frac{23}{90}$

20. An urn contains 6 white and 4 black balls. A fair die is rolled and that number of balls are chosen from the urn. The probability that the balls selected are white is

a)  $\frac{1}{5}$

b)  $\frac{1}{6}$

c)  $\frac{1}{7}$

d)  $\frac{1}{8}$

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