

Mental Ability

Ganit Bodh Series

Self Evaluation Test -18 (Probability)

- Three houses are available in a locality. Three persons apply for the houses. Each applies for one house without consulting others. The probability that all the three apply for the same house is
 - $\frac{8}{9}$
 - $\frac{7}{9}$
 - $\frac{2}{9}$
 - $\frac{1}{9}$
- Let A and B be two events such that $P(A \cup B) = \frac{5}{6}$, $P(A \cap B) = \frac{1}{4}$ and $P(\bar{A}) = \frac{1}{4}$, where \bar{A} stands for complement of event A. Then events A and B are
 - Independent but not equally likely
 - Mutually exclusive and independent
 - Equally likely and mutually exclusive
 - Equally likely but not independent
- Three mangoes and three apples are kept in a box. If two fruits are selected at random from the box, the probability that the selection will contain one mango and one apple, is
 - $\frac{3}{5}$
 - $\frac{5}{6}$
 - $\frac{1}{36}$
 - none of these
- An experiment can result in only 3 mutually exclusive events A, B and C. If $P(A) = 2P(B) = 3P(C)$, then $P(A) =$
 - $\frac{6}{11}$
 - $\frac{5}{11}$
 - $\frac{9}{11}$
 - none of these
- The probability of a man hitting a target is $\frac{3}{4}$. He tries 5 times. The probability that the target will be hit at least 3 times, is
 - $\frac{291}{364}$
 - $\frac{371}{464}$
 - $\frac{471}{502}$
 - $\frac{459}{512}$
- In a box containing 100 bulbs, 10 bulbs are defective. The probability that out of a sample of 5 bulbs, none is defective, is
 - 10^{-5}
 - 2^{-5}
 - $(0.9)^5$
 - 0.9
- A purse contains 4 copper coins, 3 silver coins and another purse contains 6 copper coins and 2 silver coins. One coin is taken from one purse, the probability that it is a copper coin, is
 - $\frac{4}{7}$
 - $\frac{3}{4}$
 - $\frac{3}{7}$
 - $\frac{37}{56}$
- A binary number is made up of 8 digits. The probability of appearance of an incorrect digit is p and that the errors in different digits are independent of each other. The probability of forming an incorrect number, is
 - $p/(8!)$
 - p^8
 - $(1-p)^8$
 - $1-(1-p)^8$
- The probability that Krishna will be alive 10 years hence, is $\frac{7}{15}$ and the probability that Hari will be alive after 10 years, is $\frac{7}{10}$. The probability that both Krishna and Hari will be alive 10 years hence, is
 - $\frac{21}{150}$
 - $\frac{24}{150}$
 - $\frac{49}{150}$
 - $\frac{56}{150}$
- A bag contains 250 nuts and 150 bolts. Half of the nuts and half of the bolts are rusted. An item is drawn at random. What is the probability that it is a rusted bolt.
 - $\frac{3}{16}$
 - $\frac{2}{15}$
 - $\frac{5}{8}$
 - $\frac{5}{16}$
- A bag contains 5 white and 3 black balls. Two balls are drawn at random. What is the probability that both balls are of different colour.
 - $\frac{1}{6}$
 - $\frac{2}{7}$
 - $\frac{1}{7}$
 - None
- From a group of 13 scientists which contain 5 Mathematicians and 8 physicists, it is required to appoint a committee of two. If the selection is

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made without knowing the identity of the scientists, what is the probability that one will be a mathematician and other a physicist?

- a) $\frac{20}{39}$ b) $\frac{10}{39}$
c) $\frac{5}{39}$ d) None

13. Of a total of 600 bolts, 20% are too large and 10% too small. The remainder are considered to be suitable. If a bolt is selected at random, . What is the probability that it will be suitable?

- a) $\frac{1}{2}$ b) $\frac{3}{10}$
c) $\frac{7}{10}$ d) None

14. A problem is given to Suresh and Mahesh for solution. The probability that Suresh will solve the problem is $\frac{2}{5}$ and that Mahesh will solve is $\frac{4}{5}$. What is the probability that the problem is not solved.

- a) $\frac{3}{5}$ b) $\frac{3}{25}$
c) $\frac{8}{25}$ d) $\frac{12}{25}$

15. A money bag has two compartments. The first compartment contain five 5 rupees notes and ten 10 rupees notes. The second compartment contain ten 5 rupees notes and Five 10 rupees notes. One note from the bag is drawn at random. What is the probability that it is a 5 rupees note?

- a) $\frac{1}{4}$ b) $\frac{1}{3}$
c) $\frac{5}{6}$ d) $\frac{1}{2}$

16. From a well shuffled pack of 52 cards, a card

is drawn. What is the probability that it is a black queen or a king.

- a) $\frac{1}{26}$ b) $\frac{1}{13}$
c) $\frac{3}{26}$ d) None

17. A police man fires 4 bullets to shoot out criminals. The probability that he hit by using the four bullets are $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$ respectively. The probability that criminal is still alive is

- a) $\frac{1}{2}$ b) $\frac{1}{4}$
c) $\frac{1}{360}$ d) $\frac{1}{3}$

18. Three dices are thrown together. What is the probability that the sum of digits appearing on its top is 10 is

- a) $\frac{1}{8}$ b) $\frac{1}{2}$
c) $\frac{5}{8}$ d) $\frac{2}{8}$

19. A pair of dice thrown together. Then the probability that the sum of digits appear on its top is 10 is

- a) $\frac{7}{12}$ b) $\frac{1}{6}$
c) $\frac{1}{12}$ d) $\frac{1}{9}$

20. Ratika has tossed a pair of dice together and she got the sum of the digits as 10. Then the probability that 4 has appear on one of the dice is

- a) $\frac{2}{3}$ b) $\frac{1}{3}$
c) $\frac{1}{12}$ d) $\frac{1}{6}$