

- Let A and B , be two events such that the probability that exactly one of them occurs is $\frac{2}{5}$, and the probability that A or B , occurs is $\frac{1}{2}$, then the probability of both of them occur together is.
 - 0.02
 - 0.20
 - 0.01
 - 0.10
- A five digits number is formed by writing the digits 1, 2, 3, 4, 5 in a random order without repetitions. Then the probability that the number is divisible by 4, is
 - $\frac{3}{5}$
 - $\frac{18}{5}$
 - $\frac{1}{5}$
 - $\frac{6}{5}$
- A basket contains 5 apples and 7 oranges and another basket contains 4 apples and 8 oranges. One fruit is picked out from each basket. The probability that the fruits are both apples or both oranges, is
 - 24/144
 - 56/144
 - 68/144
 - 76/144
- Twenty persons among whom A and B , sit at random around a round table, then the probability that there are any 6 persons between A and B is
 - $\frac{2}{19}$
 - $\frac{17}{19}$
 - $\frac{{}^{18}C_6 \times 2!}{19!}$
 - $\frac{{}^{18}C_6 \times 2! \times 2!}{19!}$
- Fifteen coupons are numbered 1 to 15. Seven coupons are selected at random, one at a time with replacement. The probability that the largest number appearing on a selected coupon be 9, is
 - $\left(\frac{1}{15}\right)^7$
 - $\left(\frac{8}{18}\right)^7$
 - $\left(\frac{3}{5}\right)^7$
 - None of these
- $S = \{1, 2, 3, \dots, 20\}$ if three numbers are chosen at random from S , the probability that they are in A. P. is
 - $\frac{3}{38}$
 - $\frac{35}{33}$
 - $\frac{33}{35}$
 - $\frac{1}{38}$
- Let P_1 , P_2 and P_3 are the probabilities of a student passing three independent exams A , B and C respectively. If P_1 , P_2 and P_3 are the roots of equation $20x^3 - 27x^2 + 14x - 2 = 0$, then the probability that the student passes in exactly one of A , B and C is
 - $\frac{3}{20}$
 - $\frac{7}{20}$
 - $\frac{1}{4}$
 - $\frac{1}{5}$
- In a box, there are 20 cards, out of which 10 are labelled as A and the remaining 10 are labelled as B . Cards are drawn at random, one after the other and with replacement, till a second A -card is obtained. The probability that the second A -card appears before the third B -card is:
 - $\frac{9}{16}$
 - $\frac{11}{16}$
 - $\frac{13}{16}$
 - $\frac{15}{16}$
- Urn A contains 6 Red and 4 Black balls and urn B contains 4 Red and 6 Black balls. One ball is drawn at random from urn A and placed in urn B . Then one ball is drawn at random from urn B and placed in urn A . If one ball is now drawn at random from urn A , then the probability that it is Red is
 - $\frac{19}{55}$
 - $\frac{32}{55}$
 - $\frac{41}{55}$
 - $\frac{9}{55}$
- Suppose $f(x) = x^3 + ax^2 + bx + c$, where a, b, c are chosen respectively by throwing a dice three times. Then, the probability that $f(x)$ is an increasing function, is
 - $\frac{4}{9}$
 - $\frac{3}{8}$
 - $\frac{2}{5}$
 - $\frac{16}{34}$