

PROBABILITY

Q.1) Probability that a non-leap year should have 53 Mondays, will be

- (A) $\frac{2}{7}$ (B) $\frac{3}{7}$
(C) $\frac{1}{7}$ (D) $\frac{5}{7}$

Q.2) A bag contains 10 red balls and some white balls. If the probability of drawing a white ball is double that of a red ball, then number of white balls in the bag will be

- (A) 10 (B) 15
(C) 20 (D) 25

Q.3) Each outcome of a sample space related to any random experiment is known as

- (A) compound event (B) elementary event
(C) sure event (D) impossible event

Q.4) 12 defective pens are academically mixed with 132 good ones. It is not possible to just look at a pen and tell whether or not it is defective. One pen is taken out at random from this lot. Determine the probability that the pen taken out is a good one.

- (A) 11/12 (B) 1/12
(C) 10/12 (D) 1/4.

Q.5) Two coins are tossed simultaneously. Then the probability of getting at list one head is

- (A) 1/4 (B) 1
(C) 3/4 (D) 0.

Q.6) Ina single throw of two dice, then the

probability of getting a doublet of odd numbers is

- (A) 11/12 (B) 1/12
(C) 5/12 (D) 5/6.

Q.7) If the probability of winning a game is 0.7, then the probability of losing a game is

- (A) 1/10 (B) 9/10
(C) 1 (D) 3/10.

Q.8) A bag contains 5 white balls and some red balls. If the probability of drawing a red ball is double that of a white ball, then the number of red balls in the bag is

- (A) 7 (B) 8
(C) 10 (D) 9.

Q.9) A bulb is taken out at random from a box of 600 electric bulbs that contains 12 defective bulbs. Then the probability of a non-defective bulb is

- (A) 0.02 (B) 0.98
(C) 0.50 (D) None

Q.10) Suppose six coins are flipped. Then the probability of getting at least one tail is -

- (A) $\frac{71}{72}$ (B) $\frac{53}{54}$
(C) $\frac{63}{64}$ (D) $\frac{1}{12}$

Q.11) A set A is containing n elements. A subset P of A is chosen at random. The set is reconstructed by replacing the elements of P. A subset of A is again chosen at random. The probability that P and Q have no common element is -

- (A) 5^N (B) $\left(\frac{3}{4}\right)^n$
(C) $\left(\frac{3}{5}\right)^n$ (D) 2^N

Q.12) If events A and B are independent and $P(A) =$

0.15, $P(A \cup B) = 0.45$, then $P(B) =$ _____

- (A) $\frac{6}{13}$ (B) $\frac{6}{17}$
(C) $\frac{6}{19}$ (D) $\frac{6}{23}$

Q.13) The probability that Kumar will hit a target is given as $1/5$. Then, his probability of at least one hit in 10 shots is -

- (A) $\frac{1}{6^{10}}$ (B) $1 - \left(\frac{4}{5}\right)^{10}$
(C) $1 - \frac{1}{5^{10}}$ (D) $1 - \frac{1}{5^{19}}$

Q.14) A bag contains 2 red, 3 green and 2 blue balls. 2 balls are to be drawn randomly. What is the probability that the balls drawn contain no blue ball?

- (A) $\frac{5}{7}$ (B) $\frac{10}{21}$
(C) $\frac{2}{7}$ (D) $\frac{11}{21}$

Q.15) A set A is containing n elements. A subset P of A is chosen at random. The set is reconstructed by replacing the elements of P. A subset of A is again chosen at random. The probability that P and Q have no common element is -

- (A) 5^N (B) $\left(\frac{3}{4}\right)^n$
(C) $\left(\frac{3}{5}\right)^n$ (D) 2^N

Q.16) One hundred identical coins each with probability p of showing up heads are tossed. If $0 < p < 1$ and the probability of heads showing on 50 coins is equal to that of heads on 51 coins; then the value of p is -

- (A) $\frac{1}{2}$ (B) $\frac{49}{101}$
(C) $\frac{50}{101}$ (D) $\frac{51}{101}$

Q.17) The probability that Kumar will hit a target is given as $1/5$. Then, his probability of at least one hit in 10 shots is -

- (A) $\frac{1}{6^{10}}$ (B) $1 - \left(\frac{4}{5}\right)^{10}$
(C) $1 - \frac{1}{5^{10}}$ (D) $1 - \frac{1}{5^{19}}$

Q.18) Three students try to solve a problem independently with a probability of solving it as $1/3$, $2/5$, $5/12$ respectively. What is the probability that the problem is solved?

- (A) $1/18$ (B) $12/30$
(C) $23/30$ (D) $1/2$

Q.19) The probability that an even A happens in one trial of an experiment is 0.4. Three independent trials of the experiment are formed. The probability that the even A happens at least once is -

- (A) 0.934 (B) 0.784
(C) 0.548 (D) 0.343

Q.20) From a pack of 52 playing cards, two cards are drawn together at random. Calculate the probability of both the cards being Kings -

- (A) $1/15$ (B) $25/57$
(C) $35/256$ (D) NONE

Q.21) From a box containing 60 standard and 40 substandard articles, two articles are chosen at random. What is the probability that one of them is standard and the other substandard?

- (A) $\frac{60}{100} \times \frac{40}{100}$ (B) $\frac{60}{100} \times \frac{39}{100}$
(C) $\frac{16}{33}$ (D) 24%

Q.22) In a single throw of two dice, the probability of getting a sum of 10 is -

- (A) $\frac{1}{12}$ (B) $\frac{1}{36}$
(C) $\frac{1}{6}$ (D) none

Q.23) If E and F be events in a sample space such that $P(E \cup F) = 0.8$, $P(E \cap F) = 0.3$ and $P(E) = 0.5$, then $P(F)$ is

- (A) 0.6 (B) 1
(C) 0.8 (D) None

Q.24) If E and F be mutually exclusive events such that $P(E) = 0.4$ and $P(F) = 0.5$, then $P(E \cup F)$ is :

- (A) 0.2 (B) 0.1
(C) 0.9 (D) None

Q.25) Two numbers 'a' and 'b' are selected (successively without replacement in that order) from the integers 1 to 10. What is the probability that will be an integer?

- (A) $\frac{17}{90}$ (B) $\frac{1}{5}$
(C) $\frac{19}{90}$ (D) $\frac{8}{45}$

Q.26) A man's packet has seven M1 coins, three M2 coins and four M5 coins. If two coins are selected simultaneously, what is the probability of yielding the minimum amount?

- (A) $\frac{3}{13}$ (B) $\frac{6}{13}$
(C) $\frac{3}{26}$ (D) $\frac{6}{43}$

Q.27) If one number is selected from the first 70 natural numbers, the probability that the number is a solution of $x^2 + 2x > 3$ is

- (A) $\frac{69}{70}$ (B) $\frac{1}{70}$

- (C) 1 (D) 0

Q.28) A number is selected from the set $\{1, 2, 3, 4, 5, 6, 7, 8\}$. What is the probability that it will be a root of the equations $x^2 - 6x + 8 = 0$?

- (A) $\frac{1}{3}$ (B) $\frac{2}{3}$
(C) $\frac{3}{4}$ (D) $\frac{1}{4}$

Q.29) A four-digit number is formed by using the digits 1, 2, 4, 8 and 9 without repetition. If one number is selected from those numbers, then what is the probability that it will be an odd number?

- (A) $\frac{1}{5}$ (B) $\frac{2}{5}$
(C) $\frac{3}{5}$ (D) $\frac{4}{5}$

Q.30) A number x is chosen at random from the numbers $-3, -2, -1, 0, 1, 2, 3$. The probability that $|x| < 2$ is

- (A) $\frac{5}{7}$ (B) $\frac{3}{7}$
(C) $\frac{2}{7}$ (D) $\frac{1}{7}$

Answer Sheet

Q.1	C	Q.11	A	Q.21	C
Q.2	C	Q.12	B	Q.22	A
Q.3	B	Q.13	B	Q.23	A
Q.4	A	Q.14	A	Q.24	C
Q.5	C	Q.15	A	Q.25	A
Q.6	B	Q.16	D	Q.26	A
Q.7	D	Q.17	B	Q.27	A
Q.8	C	Q.18	C	Q.28	D
Q.9	B	Q.19	B	Q.29	B
Q.10	C	Q.20	D	Q.30	B