

Permutation, Combination and Probability

- 1) If n is a positive integer then $n! =$
- A) $n(n+1)(n+2)\dots(n+n)$
B) $n(n-1)(n-2)\dots 3.2.1$
C) $\frac{n(n+1)}{2}$
D) $\frac{n(n-1)}{2}$
- 2) If ${}^n P_2 = 20$ then $n =$
- A) 4
B) 5
C) 6
D) 10
- 3) ${}^n C_r =$
- A) $\frac{n!}{(n-r)!}$
B) $\frac{n!}{(n-r)!r!}$
C) $\frac{n!}{r!}$
D) $\frac{r!}{(n-r)!}$
- 4) ${}^n P_r =$
- A) $\frac{n!}{r!}$
B) $\frac{r!}{(n-r)!}$
C) $\frac{n!}{(n-r)!}$
D) $\frac{n!}{(n-r)!r!}$
- 5) ${}^n P_0 =$
- A) $n!$
B) n
C) 1
D) 0
- 6) ${}^{10} P_2 =$
- A) 90
B) 10
C) 8
D) 80
- 7) If ${}^n C_6 = {}^n C_{10}$ then $n =$
- A) 4
B) 6
C) 10
D) 16
- 8) The number of words which can be formed out of the word "ASSASSINATION", when all the letters are used in each word are
- A) $\binom{13}{4,3,2,2,1,1}$
B) $13!$
C) $\frac{4!}{13!}$
D) $\frac{13}{4!}$
- 9) The numbers of diagonals in ten sided figure is
- A) 10
B) ${}^{10} C_2$
C) ${}^{10} C_2 - 10$
D) 45
- 10) The number of ways a hockey eleven can be selected out of 15 players if it includes a particular player.
- A) ${}^{15} C_{11}$
B) ${}^{14} C_{11}$
C) ${}^{14} C_{10}$
D) ${}^{15} C_{10}$

- 11) ${}^5P_0 =$
 A) 5
 B) 0
 C) 15
 D) 1
- 12) The number of possible permutations of the letters of the word, “ADDING” having two D’S together.
 A) 5!
 B) 3!
 C) 4!
 D) 25
- Answer: A
- 13) For any event A
 A) $0 \leq P(A) \leq 1$
 B) $-1 \leq P(A) \leq 1$
 C) $-2 \leq P(A) \leq 2$
 D) $0 \leq P(A) \leq 2$
- 14) The number of words that can be formed from the letters of the word, “PAKPATTAN” are
 A) 9!
 B) 9C_7
 C) 9P_7
 D) $\frac{9!}{3!2!2!}$
- 15) The number of words that can be formed from the letters of the word, “COMMITTEE” are
 A) 9P_9
 B) 9C_9
 C) $\frac{9!}{2!2!2!}$
 D) 9
- 16) The events A & B are said to be disjoint if $A \cap B$ is
 A) ϕ
 B) A
 C) B
 D) $A \cup B$
- 17) A dice is thrown then the probability to get an even number is
 A) $\frac{4}{5}$
 B) $\frac{3}{5}$
 C) $\frac{2}{3}$
 D) $\frac{1}{2}$
- 18) A slip is picked out of 8 slips numbered from 1 to 8 then the probability to get number 4 is
 A) 8
 B) $\frac{1}{8}$
 C) $\frac{1}{2}$
 D) $\frac{3}{8}$
- 19) The three digit numbers that can be formed from 0, 1, 2, 3, 4, when no digit is repeated are
 A) 48
 B) 36
 C) 24
 D) 10
- 20) The number of distinct permutations from the letters of the word, “ARTICLE” using all the letters are
 A) 7
 B) 7!
 C) 49
 D) 59
- 21) Teams A & B are playing football match. The probability that A will win is $\frac{4}{13}$ that of B is $\frac{5}{13}$. The probability that the match will end in a draw is
 A) $\frac{5}{13}$
 B) $\frac{4}{13}$
 C) $\frac{9}{13}$
 D) $\frac{3}{13}$
- 22) A & B are mutually exclusive events the $P(A \cup B) =$
 A) $P(A) \cup P(B)$
 B) $P(A) + P(B)$
 C) $P(A) + P(B) - P(A \cap B)$
 D) $P(A) - P(B)$

- 23) If $A \subset S$ then $P(A') =$
 A) $1 + P(A)$
 B) $1 - P(A)$
 C) $\frac{1}{P(A)}$
 D) $P(A)$
- 24) The probability that Aslam was not born in a month which begins with the letter "J" is $\frac{3}{4}$, then the probability that he was born in January, June, July is
 A) $\frac{5}{4}$
 B) $\frac{3}{4}$
 C) $\frac{1}{4}$
 D) $\frac{7}{4}$
- 25) A bag contains 30 balls, some of which are red and the remaining are blue. The probability of drawing red is $\frac{1}{6}$, then the number of blue balls are
 A) 25
 B) 20
 C) 48
 D) 16
- 26) The number of diagonals in 8 – sided figure is
 A) 64
 B) 20
 C) 48
 D) 16

Written by NAUMAN IDREES
 (nomi255@yahoo.com)
 FSc (Session: 2007-09)
 ICMS College System Hayatabad, Peshawar