Fill in the blanks

1. The factorial notation was introduced by ……………
2. $0! = $ ……………
3. An arrangement of 'n' objects such that one object is first, one is second, one is third and so on is called ………………
4. $n! = n(n-1)(\underline{\hspace{1cm}})\ldots\ldots\ldots\ldots 3\cdot 2\cdot 1$
5. A permutation of 'n' different objects taken r $(\leq n)$ at a time is denoted by …………
6. $^{n}P_{r} = $ …………….
7. If $r = n$ then $^{n}P_{r} = $ ………………
8. $^{n}P_{r} = $ ……………… if $n = 0$ and $r = 0$.
9. Number of permutations of letters of word BITTER taken all at time = …………..
10. The permutations of things which can be represented by points on a circle are called ………………
11. The number of combinations of n different objects taken r at a time is denoted by ………………
12. Formula for $^{n}C_{r} = $ ………………
13. $^{n}C_{r} \times r! = $ ………………
14. In $C(n,r)$ if $r = n$ then $C(n,r) = $ ………………
15. In $\binom{n}{r}$ if $r = 0$ then $\binom{n}{r} = $ ………………
16. In $^{n}C_{r}$ if $n = 0$ and $r = 0$ then $^{n}C_{r} = $ ………………
17. $^{n}C_{r-1} = $ ………………
18. Blaise Pascal and Pierre De Fermat introduced ……………… theory.
19. ……………… is numerical evaluation of a chance that a particular event would occur.
20. The set S containing all possible outcomes of a given experiment is called ………………
21. A particular outcomes is called ……………… and is denoted by E.
22. An event E is ……………… of sample space S.
23. If a sample space S, and an event is A and another B, then if A and B are disjoint they are said to be ………………
24. A and B are said to be equally likely events if each one of them has ……………… number of chances of occurrences.
25. Formula for addition of probability of event E is given by $P(E) = $ …………
26. Formula for addition of probabilities of A and B when A and B are disjoint is ……………..
27. $P(A \cup B) = $ ……………… when $B \subseteq A$ (A and B are overlapping)
28. Two event A and B are said to be ……………… if the occurrence of any one of then does not influence the occurrence of other event.

KEY (CHAPTER 7)

01- Christian Kramp

02- 1

03- Permutation

04- $n-2$

05- ^nP_r

06- $\dfrac{n!}{(n-r)!}$

07- $n!$

08- 1

09- $\dfrac{6!}{2} = 360$

10- Circular permutation

11- ^nC_r

12- $\dfrac{n!}{(n-r)!\cdot r!}$

13- ^nP_r

14- 1

15- 1

16- 1

17- ^nC_r

18- Probability

19- Probability

20- Sample Space

21- Event

22- Subset

23- Mutually exclusive event

24- Equal

25- $\dfrac{n(E)}{n(S)}$, where S is sample space

26- $P(A\cup B) = P(A) + P(B)$

27- $P(A) + P(B) - P(A\cap B)$

28- Independent

The End