

1. From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done?

A. 564

B. 645

C. 735

D. 756

2. In how many different ways can the letters of the word 'LEADING' be arranged in such a way that the vowels always come together?

- A. 360
- B. 480
- C. 720**
- D. 5040

3. In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?

- A. 810
- B. 1440
- C. 2880
- D. 50400**

4. Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?

- A. 210
- B. 1050
- C. 25200**
- D. 21400

5. In how many ways can the letters of the word 'LEADER' be arranged?

- A. 72
- B. 144
- C. 360**
- D. 720

6. In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?

- A. 159
- B. 194
- C. 205
- D. 209**

7. How many 3-digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated?

- A. 5

B. 10

C. 15

D. 20

8. In how many ways a committee, consisting of 5 men and 6 women can be formed from 8 men and 10 women?

A. 266

B. 5040

C. 11760

D. 86400

9. A box contains 2 white balls, 3 black balls and 4 red balls. In how many ways can 3 balls be drawn from the box, if at least one black ball is to be included in the draw?

A. 32

B. 48

C. 64

D. 96

10. In how many different ways can the letters of the word 'DETAIL' be arranged in such a way that the vowels occupy only the odd positions?

- A. 32
- B. 48
- C. 36**
- D. 60

11. In how many ways can a group of 5 men and 2 women be made out of a total of 7 men and 3 women?

- A. 63**
- B. 90
- C. 126
- D. 45

12. How many 4-letter words with or without meaning, can be formed out of the letters of the word, 'LOGARITHMS', if repetition of letters is not allowed?

- A. 40
- B. 400
- C. 5040**
- D. 2520

13. In how many different ways can the letters of the word 'MATHEMATICS' be arranged so that the vowels always come together?

- A. 10080
- B. 4989600
- C. 120960**
- D. None of these

14. In how many different ways can the letters of the word 'OPTICAL' be arranged so that the vowels always come together?

- A. 120
- B. 720
- C. 4320
- D. 216\0

15. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

- A. $1/2$
- B. $2/5$
- C. $8/15$
- D. $9/20$**

16. A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?

- A. $10/21$**
- B. $11/21$
- C. $2/7$
- D. $5/7$

17. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green?

- A. $1/3$**

- B. $3/4$
- C. $7/19$
- D. $8/21$

18. What is the probability of getting a sum 9 from two throws of a dice?

- A. $1/6$
- B. $1/8$
- C. $1/9$**
- D. $1/12$

19. Three unbiased coins are tossed. What is the probability of getting at most two heads?

- A. $3/4$
- B. $1/4$
- C. $3/8$
- D. $7/8$**

20. Two dice are thrown simultaneously. What is the probability of getting two numbers whose product is even?

A. $1/2$

B. $3/4$

C. $3/8$

D. $5/16$

21. In a class, there are 15 boys and 10 girls. Three students are selected at random. The probability that 1 girl and 2 boys are selected, is:

A. $21/46$

B. $25/117$

C. $1/50$

D. $3/25$

22. In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?

- A. $1/10$
- B. $2/5$
- C. $2/7$**
- D. $5/7$

23. From a pack of 52 cards, two cards are drawn together at random. What is the probability of both the cards being kings?

- A. $1/15$
- B. $25/57$
- C. $35/256$
- D. $1/221$**

24. Two dice are tossed. The probability that the total score is a prime number is:

- A. $1/6$
- B. $5/12$**
- C. $1/2$
- D. $7/9$

25. A bag contains 4 white, 5 red and 6 blue balls. Three balls are drawn at random from the bag. The probability that all of them are red, is:

A. $1/22$

B. $3/22$

C. $2/91$

D. $2/77$

26. Two cards are drawn together from a pack of 52 cards. The probability that one is a spade and one is a heart, is:

A. $3/20$

B. $29/34$

C. $47/100$

D. $13/102$

27. One card is drawn at random from a pack of 52 cards. What is the probability that the card drawn is a face card (Jack, Queen and King only)?

A. $1/13$

B. $3/13$

C. $1/4$

D. $9/52$

28. A bag contains 6 black and 8 white balls. One ball is drawn at random. What is the probability that the ball drawn is white?

A. $3/4$

B. $4/7$

C. $1/8$

D. $3/7$