Permutations and Combinations

1. In how many ways can five boys be made to stand in a row such that two of them, P and Q are always together?
A.24 B.48 C.12 D.36 E. None of these

2. In how many ways the letters of the word “WORDART” be arranged?
A.720 B.360 C.5040 D.2520 E. None of these

3. In how many number of ways the word “TYPICAL” be arranged?
A.5040 B.2520 C.10040 D.720 E.1440

4. In an auditorium the chairs were arranged such that the number of rows was 3 more than the number of columns. The chairs are rearranged by removing 4 columns and adding 8 rows without adding or removing any chair. How many people can sit in that auditorium at a time?
A.158 B.154 C.174 D.152 E. None of these

5. In how many ways word “ENERGY” be arranged in that all vowels and consonants come together?
A.48 B.36 C.24 D.18 E.12

6. In how many ways a selection of 4 students having at least 2 girls can be selected from 4 girls and 5 boys?
A.80 B.60 C.90 D.120 E. None of these

7. In how many ways the word “PRIDE” be arranged so that all vowels and consonants come together?
A.12 B.18 C.24 D.32 E. None of these

8. In how many ways a committee of 5 members can be formed from 6 men and 7 women in which at least 3 men should come? A.531 B.359 C.429 D.542 E.325

9. How many 3 digit numbers can be formed from the digit 1, 2, 3, 5, 7 which are divisible by 5 and none of the digits is repeated? A.3 B.6 C.9 D.12 E. None of these

10. How many words of 4 consonants and 4 vowels can be formed, out of 8 consonants and 5 vowels?
A.240 * 5! B.350 * 8! C.240 * 8! D.350 * 5! E. None of these

11. The number of words that can be formed out of the letters of the word PICTURE, so that the vowels occupy even places is?
A.120 B.144 C.165 D.188 E. None of these

12. A bundle of five pencils is to be formed from a bundle A of 5 different pencils and another bundle B of 4 different Pencils, taking at least one pencil from each bundle. In how many ways bundle can be formed where number of pencils from Bundle A should be less than Bundle B?
A.95 B.85 C.75 D.35 E. None of these

13. There are 10 boys and 8 girls out of which a team of 8 players to be selected. In how many ways team can be selected if at least 4 girls and 2 boys should be in team?
A.21840 B.22880 C.21420
D.22480 E. None of these

14. In how many ways 6 Teachers, 7 Doctors and 8 Engineers be seated in a row in the conference hall, so that all person of same profession sits together?
A.6!7!8!1! B.6!7!8!2! C.6!7!8!3!
D.6!7!8!4! E. None of these

15. A team of 11 players is to be selected out of 6 defenders, 4 mid-fielders and 5 strikers. Find the number of ways of selecting at least 3 strikers in the team?
A.1200 B.1280 C.1160 D.1050 E.1260

16. In how many ways a selection of 4 students having at least 2 boys can be selected from 4 boys and 5 girls?
A.63 B.72 C.81 D.90 E. None of these

17. In how many different ways a pack of cards can be arranged such that first four cards are king, last four cards are queen, aces are exactly at the middle and rest of the cards are arranged in such a way that a black card always follow a red card?
A.(4!)3 x (20!)2 B.12! X 40! C.(4!)3 x 40!
D.52! E. None of these

18. How many ways the word ‘MANAGEMENT’ can be arranged without repetition?
A.226800 B. 114400 C. 156200 D. 172000 E.220400

19. In a group, there are 4 Arts students, 8 Commerce students and some Science students. Number of ways in which 1 Arts student, 1 Commerce student and 1 Science student can be selected from the group is 192. A committee of six members is to be formed such that the group contains 3 Science students, 2 Commerce students and 1 Arts students. Find the total number of ways in which the committee can be formed.
A.2240 B.1680 C.1240 D.1060 E. None of these

20. In a group of 4 boys and 3 girls, three children are to be selected. In how many different ways can they be selected such that at least one boy should be there?
A.60 B.35 C.42 D.34 E.38

21. In a group of 7 boys and 9 girls, 5 members are to be selected. In how many different ways can they be selected such that at least one boy should be there?
A.2450 B.4242 C.1840 D.4280 E. None of these

22. 17 buses are running between two places Nagercoil and Madurai. In how many ways can a family go from Nagercoil to Madurai and return by a different bus?
A.220 ways B.210 ways C.252 ways D.272 ways E. None of these

23. In a party hall, 10 persons are to be arranged around a round table. If two particular persons are not to be seated side by side, then what is the total number of arrangements?
A.9 * 10! B.7 * 8! C.35 * 7! D.40 * 6! E. None of these

24. When 3 fair dice are rolled simultaneously, in how many outcomes will at least one of the dice show 3?
A.91 B.87 C.68 D.69 E. None of these

25. In a group of 6 girls and 5 boys, 3 members are to be selected. In how many different ways can they be selected such that at least one girl should be there?
A.195 B.210 C.155 D.180 E. None of these

26. A teacher wants to select a boy out of 8 boys and a girl out of 7 girls for the writing competition. In how many ways can be select?
A.42 B.60 C.28 D.56 E.36

27. In how many different ways a group of 5 men and 7 women can be formed out of 8 men and 10 women?
A.4240 B.6380 C.6720 D.5860 E. None of these

28. In a bag contains 2 orange and 3 apples. If 2 fruits are selected, in how many ways that can be selected such that at least one apple?
A.8 B.9 C.10 D.11 E. None of these

29. The bank manager forms a secret 2 – digit code from the numbers 0 -9. But he set code as the first digit will not be 0 and the second number will not be even number. Then what are the possible ways to set the code?
A.54 B.55 C.64 D.45 E.50

30. How many words can be formed by using all the letters of the word “NISARGA” so that the vowels are never together?
A.2640 B.1230 C.2460 D.4920 E. None of these

31. In how many different ways can the letters of the word “PHONE” be arranged so that the vowels may occupy only odd positions?
A.54 B.27 C.9 D.18 E. None of these

32. In how many ways can a group of 4 men and 3 women can be made out of a total of 6 men and 5 women?
A.150 B.120 C.180 D.210 E. None of these

33. In how many ways can the person sent letters to 10 different persons, if the latter distributed by three different postmen?
A.410 B.210 C.510 D.310 E. None of these

34. In how many different ways can the letters of the word “salty” be arranged? A.24 B.60 C.80 D.110 E.120 35. There are 7 periods in each working day of a college. In how many ways can one organize 6 subjects such that each subject is allowed at least one period?
A.33200 B.15120 C.10800 D.43600 E. None of these

36. Among a set of 5 blue balls and 7 red balls, how many selections of 5 balls can be made such that at least 3 of them are blue balls?
A.234 B.280 C.186 D.215 E.246

37. How many ways the letters of the word “CURRENT” be arranged?
A.2520 B.1260 C.5040 D.720 E. None of these

38. In how many ways a selection of 4 students having at least 2 boys can be selected from 4 boys and 5 girl students? A.36 B.72 C.80 D.81 E. None of these

39. In how many ways the word “IBPSGUIDE” be arranged so that all the consonants and vowels always come together?
A.2880 B.1440 C.720 D. 360 E.180

40. In how many ways the letters of word “SIMPLE” can be arranged so that all vowels come together?
A.180 B.210 C.240 D.270 E.120

41. In how many different ways can the letters of the word ‘CABINET’ be arranged?
A.5040 B.2520 C.720 D.240 E.360

42. A teacher and head master are chosen out of a group having 15 persons. How many ways are there?
A.120 B.180 C.210 D.240 E.280

43. In how many ways the letters of the word ‘ARMOUR’ can be arranged?
A.720 B.360 C.120 D.650 E. None of These

44. How many four letter words can be formed out of the letters of the word is “LOGARITHMS”?
A.2520 B.720 C.5040 D.360 E. None of these

45. In how many ways word “BANKING” can be arranged in such a way that all vowels and consonants comes together? A.120 B.280 C.360 D.240 E. None of these

46. In a class has 3 boys and 2 girls, two students were selected. In how many different ways can they be selected such that at least one girl should be there?
A.5 B.8 C.7 D.6 E. None of these

47. Two students are selected from 8 students. How many ways are there to achieve this?
A.68 B.64 C.56 D.52 E. None of these

48. In how many ways the letters of the word “COURSE” can be arranged?
A.360 B.240 C.540 D.128 E. None of these

49. A bag contains 4 red balls and three green balls. If two balls are selected, in how many different ways the balls selected such that at least one red ball should be there?
A.18 B.20 C.36 D.40 E. None of these

50. How many three digit numbers can be formed with the digits 2, 3, 5, 6, 9, if repetition of digits is allowed?
A.120 B.240 C.144 D.720 E. None of these

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
B	D	A	B	A	E	C	A	D	B	B	E	E	C	E	C	A	A	A	D	B	D	B	A	C
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
D	C	B	D	C	E	A	D	E	B	E	A	D	A	C	A	C	B	C	D	C	C	E	A	E