13. How many diagonals are there in a polygon?

14. If there are 12 persons in a party, and if each two of them shake hands with each other, how many handshakes happen in the party?

15. A box contains 5 diff. red and 6 diff. white balls. In how many ways 6 balls be selected so that there are at least two balls of each colour?

16. How many diff. selections of 4 books can be made from 10 different books. if (i) there is no restriction

    (ii) Two particular books are always selected

    (iii) Two particular books are never selected

17. How many ways can you form a word using the letters from the word

    (i)   ENTERTAINMENT

    (i) ~~How~~ vowels together   (ii) vowels never together

18. In how many ways 10 persons may be arranged in a(i) line (ii) circle?

19. In how many ways can 7 identical beads be stung into a ring?

20. In how many ways can 5 gentlemen & 5 ladies sit together at a round table so that no two ladies may be together?