TUTORIAL ASSIGNMENT:-I
Unit-II: PERMUTATIONS & COMBINATIONS

Q1 Evaluate the following,

i) $^5P_3 + ^7P_2$ ii) $^8P_3 + ^6P_4$ iii) $^{10}P_8 + ^{10}P_7$ iv) $^8C_4 + ^7C_3$ v) $^8C_6 + ^8C_7$

Q2. In how many possible the letters in the word FATHER be arranged so that,

a) All the vowels are always together b) they are not together

Q3. Five books on Mathematics, 4 books on English & 3 books on History are to be put in a shelf in a row. In how many possible ways can this be done so that,

- Books of same subjects are always together
- Only English books are together
- No two Mathematics are together

Q4. A box contains 6 Green & 5 Red balls. A pair of balls is drawn at random. Find the no of possible selections so that,

- Both the balls are of same color.
- They are of different colors
- Only red balls are drawn

Q5. In how many possible ways 3 cards can be drawn from the pack of 52 cards so that,

i) all 3 are Ace cards;
ii) there are two kings and one queen
iii) cards are of same suit