

BCM SCHOOL BASANT AVENUE FUGRI ROAD LUDHIANA
ASSIGNMENT OF CLASS XISC
PERMUTATIONS AND COMBINATIONS

1	Everybody in a room shakes hands with everybody else. The total number of handshakes is 66. The total number of persons in the room is (A)11 (B)12 (C)13 (D)14	
2	${}^{15}C_8 + {}^{15}C_9 - {}^{15}C_6 - {}^{15}C_7 = \underline{\hspace{2cm}}$. (A)0 (B)112 (C)212 (D)501	
3	The number of parallelograms that can be formed from a set of four parallel lines intersecting another set of three parallel lines is (A)18 (B)34 (C)24 12(D)	
4	A sports team of 11 students is to be constituted, choosing at least 5 from Class XI and at least 5 from Class XII. If there are 20 students in each of these classes, in how many ways can the team be constituted?	
5	If the letters of the word RACHIT are arranged in all possible ways as listed in dictionary. Then what is the rank of the word RACHIT?	
6	In how many ways can 5 children be arranged in a row such that (i) two of them, Ram and Shyam, are always together? (ii) two of them, Ram and Shyam, are never together?	
7	If ${}^nC_{r-1} = 36$, ${}^nC_r = 84$ and ${}^nC_{r+1} = 126$, then find rC_2	
8	Find the number of ways in which 5 boys and 5 girls be seated in a row so that (i) No two girls may sit together. (ii) All the girls sit together and all the boys sit together. (iii) All the girls are never together.	
9	A boy has 3 library tickets and 8 books of his interest in the library. Of these 8, he does not want to borrow Chemistry Part II, unless Chemistry Part I is also borrowed. In how many ways can he choose the three books to be borrowed?	
10	What is the number of ways of choosing 4 cards from a pack of 52 playing cards? In how many of there (i) Four cards one of the same suit (ii) Four cards belong to four different suits (iii) Are face cards. (iv) Two are red cards & two are black cards. (v) Cards are of the same colour?	

