Strand Life Science Placemnt Papers 2010

Total Marks: 50
Time :1hours

1. **Ram and Sham are playing a game. Ram select 3 numbers out of{1,2,3,4,5,6} and remaining 3 numbers belong to Sham.**
   Palyers who rolls one of the numbers belonging to him wins. Ram rools first and then sham. They keep roolling the dice turn until one of them wins.

   a. What is the probability of Ram winning the game: P(Ram)

   b. What is the probability of Sham winning the game: P(Sham)

   c. What is the value of P(Ram)+P(Sham)

   (Marks:5+5+5)

   2. We have n elements (n=2^k where k is an interger greater than equals to 1) stored in an array such that each element at position i(i less than equals ton/2) is grteater than elements stored at position 2*i and 2*i+1. Write a pseudocode to print the array in a sorted from. All the values in array are less than Nmax.

   Array is indexed 1-based i.e. first elements correspond to position 1.

   (Marks:10)

   3. Question on merge sort.

   (Marks:10)

4. We want to design a poster designing software. The software should be able to design basic posters. Each poster can contain some text and drowings. Each drawing is a shape or combination of shapes from a fixed set of shapes. The software should also provide users with Templates. Templates is a basic structure for the poster containg one or more texts and drowings. The users should be able to creates texts , drawings and posters(from scratch or from existing template). Your goal is to identify and design classes which rtepresents the scenario and can used in the final software.