

# **TnP Question Bank for the forthcoming batches**

## **ROPOSO, SOFTWARE ENGINEER**

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**Batch - F1**

The whole campus process consisted of three sections:

(A) In this section, the company had shortlisted the students based on their skill sets and projects. Around 110 students were selected out of 210 eligible students.

(B) In this section, the company conducted a pen paper test. 15 Mcqs were given in the test and we had 20 minutes to solve them. The questions were based on ds & algorithm some aptitude questions and the level was easy to moderate. 49 students were shortlisted out of 110 students.

(C) This section consisted of 3-4 technical rounds.

### **ROUND 1:- (TECHNICAL)**

1. He asked me to introduce myself . He quickly went through my resume and then we had a discussion about my work experience (Internship).
2. Suppose a construction project of a building is going on near your college. you are given the number of meetings to be held in that building and also the starting and ending time of those meetings. You have to tell the minimum number of offices required in that building for those meetings. I gave the map based solution. So he asked me 2-3 questions based on map. (Complexities, Implementation)
3. A binary tree is given. You have to print the left view of that binary tree.
4. Given an array of integers. Find the length of longest strictly increasing subsequence in that array.
5. A short discussion on my projects.
6. Most challenging work of my life.

### **ROUND 2:- (TECHNICAL)**

1. Given a binary tree and two values A and B. Write a function to find the least common ancestor. He asked me the complexity and then he changed the binary tree to bst and asked me only approach and complexity to solve that problem.
2. Given an array of integers. Find the integer which has the frequency greater than  $n/4$ . If there is more than one such integer print any one, if it is not present print -1. Use constant space.
3. He asked me 100 prisoners problem. He asked me if i know it before. I said "NO" as i had not heard of it.
4. He asked me 10 coins(5 head, 5 tail) problem and gave me three minutes to solve it. I solved it in 2 minutes.

### **ROUND 3:- (TECHNICAL)**

1. Detailed discussion of one of my project.
2. He asked me a mathematical problem. Given a circle and its centre. Then if a triangle is drawn, what is the probability that centre will lie inside that triangle?
3. You are given two hourglasses. One measures 4 minutes and one measures 7 minutes. Measure exactly 9 minutes from them.

#### **ROUND 4:- (TECHNICAL + HR)**

1. You are given 8 identical looking balls. One of them is heavier than the rest of the 7 (all the others weigh exactly the same). You are provided with a simple mechanical balance. How many times you will use that balance to find the heavy ball.
2. Now N balls are given with one heavy ball. How many time you will use the balance in terms of N. I gave the  $\log_2 N$  based solution. He asked me to optimize it. With little hint i was able to give the  $\log_3 N$  based solution.
3. He modified the previous question that you don't know whether the odd ball is heavy or light from others. Now what you will do? He asked me the solution and complexity.
4. Detailed discussion of all my projects and asked number of questions from them.

#### **SOME HR QUESTIONS:-**

1. Where have you been placed before?
2. Why are you not going in that company?
3. How much experience do you have in competitive Programming?

#### **VERDICT : SELECTED**

#### **Tips for juniors:**

1. You must have logical thinking.
2. You must be good in data structure & algorithm.
3. You must have strong basics of things you know.
4. You must have good projects and the good knowledge of the part you did in the projects.
5. Whatever you speak, speak with confidence.