

1. Monte Carlo Simulation

- a. Statement : A project manager approaches to you and says that there is a 90% chance to win full project and rest for part project. There are about 50-100 tasks in each module. Each task can take between 5-10 days . About 10-12 modules if we get part of the project and 20-24 if we get the entire project. The resources vary between 3 to 7 for a module. What is the most likely time to complete the project?

2. Genetic Algorithm

- a. Statement : You are going to spend a month in the wilderness. You're taking a backpack with you, however, the maximum weight it can carry is 20 kilograms. You have a number of survival items available, each with its own number of "survival points". Your objective is to maximize the number of survival points while selecting the items. Use genetic algorithm to solve this.