

**Class Test 3: CSE 207 – Algorithm, Fall 2020**

**Total Marks: 20, Time: 25 minutes**

You are playing a **Shooting** game and you get injured. You need **n** unit energy to get heal. There are **m** different types of **energy meds of  $e_1, e_2, \dots, e_m$  units and of unlimited amounts**. You are a lazy player and decided to fill up your energy with **minimum numbers of meds**; you are allowed to take the same med multiple times. Which classic problem this scenario maps to? Propose a **DP** algorithm to solve this problem and simulate the result for following data. **[4+6+10]**

*$n = 13 + (id\%2)$  units.*

*Available energy meds = 10, 8, 6, 2, 1 units*