Question 1 (REST Web services)

Discuss what a REST Web service is, all the concepts and technologies underlying them. Describe how concretely a programmer can develop a REST Web service in Java, by providing simple pseudo-code. Then design the interfaces of a (set of) REST Web service(s) that are able to provide information on public transportation, e.g., lines of buses, stops, time of scheduled arrivals, current (real) time of arrival, etc. In doing this last exercise. please provide motivations on the choices you may do, and develop the solution on the basis of such assumptions

Question 2 (SCRUM)

Describe ALL the basic elements of SCRUM. Then consider a system as INFOSTUD (the system used by Sapienza University of Rome for managing exams and all the students' lifecycle - you know all its features/functionalities) and assume you have a team of 7 persons - including UI designers, database designer, programmers, etc. The length of a sprint of 4 weeks. Propose and discuss a possible product backlog, and show the division of the features over the sprints, by presenting how you would evolve the system over 6 months of project (i.e., you have to present the initial 6 sprints of the project).

Question 3 (Function Points)

Describe the method of Function Points for evaluating software development complexity. Provide all the basic notions and exemplify through examples, whenever possible and appropriate.