

University of Asia Pacific
Department of Computer Science and Engineering
Mid-Semester Examination Spring-2020
Program: B.Sc. Engineering

Course Title: Software Engineering

Course No.: CSE 321

Credit: 3.00

Time: 1.00 Hour.

Full Mark: 60

There are **Four** Questions. **Answer three questions including Q-1 and Q-2.**

1. a. What are the problems and challenges that software engineers are likely to face in the 21st century? How to overcome those challenges? [10]
- b. To help counter terrorism, many countries are planning the development of computer systems that track large numbers of their citizens and their actions. Clearly this has privacy implications for citizens. On other hand, tracing system helps to protect terrorism. [10]
Discuss the ethics according to software engineering of developing this type of system.
2. a. Draw a use case diagram for Online Examination System. The system includes the following information: [10]

The University of Asia Pacific (administrator) has a facility to conduct an online exam by providing questions to the students and the administrator to verify the details of the students are correct or not. Then, the administrator provides authentication to write the exam of the verified students. After conducting the exam the administrator needs to pay attention to manage the examination. Finally, the admin gets the result details.

Every student has permission to login the system, before that the student needs to complete the registration process. After that student needs to select the required exam from the list and gets the selected question paper from the administrator. After answering each question the student submits the answer script of the predefined procedure and gets the result instantly.
- b. According to question no. 2 (a) to register Online Examination System, every student needs to fill up following information: Name, Roll, Gender, Department, university provided E-mail address and Password. [10]

Create an object of registration class using your personal information according to UML object diagram.

3. a. Giving reasons for your answer based on the type of system being developed, suggest the most appropriate generic software process model that might be used as a basis for managing the development of the following systems: [10]
- A virtual reality system to support software maintenance
- b. What are the industry based examples of Prototyping Model? Give an explanation on behalf of your example. [10]

OR

4. a. Giving reasons for your answer based on the type of system being developed, suggest the most appropriate generic software process model that might be used as a basis for managing the development of the following systems: [10]
- A university accounting system that replaces an existing system
- b. What are the industry based examples of Agile Model? Give an explanation on behalf of your example. [10]