Monday, 09 November 2020

EAST WEST UNIVERSITY
Department of Computer Science & Engineering
B.Sc. in Computer Science and Engineering Program
MidTerm I Examination, Fall 2020 Semester

Course:	**CSE411 Software Engineering and Information System Design, Section-2**
Instructor:	**Md. Mohsin Uddin, Senior Lecturer, Department of CSE**
Total Marks:	**40 (20 will be counted for final grading)**
Time:	**1 Hour and 20 Minutes**

Note: There are **Five** questions, answer all of them. Course Outcome (CO), Cognitive Level and Marks of each question are mentioned at the right margin.

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1. Which requirement engineering process would be the most appropriate for each of the following scenarios? **Justify** your answer. [CO1,C3, Marks:10]

i. Developing tests for requirements to check testability.

ii. A group of people write ideas on sticky notes as part of a brainstorming session.

iii. The user and system requirements are being written in a requirements document.

iv. Checking whether the requirements be implemented given available budget and technology.

v. Checking whether there are any requirements conflict.

vi. People often find it hard to describe what they do because it is so natural to them. Sometimes, the best way to understand it is to observe them at work.

2. "Agile Software Development is based on both Incremental and Iterative Development "- Explain this statement. [CO1,C3, Marks:4]

3. Each of the following scenarios is the description of the software development model. **Where** does each of these models stand in predictive versus adaptive scale? **Justify** your answers and **illustrate** with a suitable diagram. [CO1,C3, Marks:6]

i. The customer must have patience. A working version of the program(s) will not be available until late in the project time span. A major blunder, if undetected until the working program is reviewed, can be disastrous.

ii. There may be a compelling need to provide a limited set of software functionality to users quickly and then refine and expand on that functionality in later software releases.

4. Giving reasons for your answer based on the type of system being developed, **suggest** the most appropriate software process model (Agile vs PlanDriven) that might be used as a basis for managing the development of the following system scenarios: [CO1,C4, Marks:12]

i. A university advising system that replaces an existing system.

ii. A virtual reality system to support software maintenance.

iii. An Autopilot system in aircraft.

iv. System is being developed with small co-located team.

5. Which type of system conversion can be implemented for software implementation phase of Software development lifecycle (SDLC) for each of the following scenarios? **Justify** your answer. [CO1,C3, Marks:8]

i. The new system has several independent components.

ii. The analyst or Project manager (PM) decided that the users cannot rely on the previous systems.

iii. Extra staffs required to supervise parallel runs are not available.

iv. The problems such as errors in processing or inability to handle certain types of transactions arise in using the new system, the organisation can still fall back to the old system without loss of time or loss of service.