



Department of Computer Systems Engineering,  
University of Engineering and Technology, Peshawar,  
Pakistan

Paper: CSE-406

Midterm Exam (7<sup>th</sup> Semester, Fall 2023)

Course Name: Software Engineering

Marks: 20

Time: 2 Hours

Note: Attempt all questions on the answer sheet. Try to be concise in your answers and not write examples which have no meaning to the question being asked.

Question No. 1 (Marks=5) (CLO-1)

What is your understanding of the "Bathtub Curve", and "Idealized Curve". How do they differentiate from one another. Give an example to clear this concept.

Question No. 2 (Marks=5) (CLO-2)

Describe a process framework in your own words. When we say that framework activities are applicable to all projects, does this mean that the same work tasks are applied for all projects, regardless of size and complexity? Explain.

Question No. 3 (Marks=5) (CLO-2)

What are the advantages and disadvantages of developing software in which quality is "good enough"? That is, what happens when we emphasize development speed over product quality?

Question No. 4 (Marks=5) (CLO-2)

Is it possible to combine process models? Which phases are similar and which are different? Give an example showing your understanding of the question.



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Final term Exam (7<sup>th</sup> Semester, Fall 2023)

Paper: CSE-406

Course Name: Software Engineering  
Time: 2 Hours

Marks: 50

Note: Attempt all questions on the answer sheet. Try to be concise in your answers and not write examples which have no meaning to the question being asked.

Question No. 1 (Marks=13) (CLO-1-2)

Write the functional and non-functional requirements for the following two projects. Which SDLC model do you think would be best and why?

- Bike racing game
- An online banking system

Question No. 2 (Marks=14) (CLO-2)

You are a WebApp designer for Future Learning Corporation, a distance learning company. You intend to implement an Internet-based "learning engine" that will enable you to deliver course content to a student both on mobile and laptop. The learning engine provides the basic infrastructure for delivering learning content on any subject (content designers will prepare appropriate content). Develop a design for the learning engine. (Mention the SDLC being used, what features you will rely on, how it is treated from other aspects etc.)

Question No. 3 (Marks=12) (CLO-3)

Explain why Agile methods may not work well in organizations that have teams with a wide range of skills and abilities and well-established processes. Give a clear example explaining your answer with the differences clearly being highlighted.

Question No. 4 (Marks=11) (CLO-4)

You work for a large social networking" company which has recently introduced a one-to-one chat mechanism, promising that they will never censor conversations. Users are now reporting that their friends' computers are being compromised by malicious software. When users click on links within messages sent by this malicious software, their machine is also compromised, and spreads the infection still further. A crisis meeting has decided that the chat software must be modified to block this worm" behavior. As the team lead of this project, how will you approach the development, how will you estimate how long the task will take, and how will you establish that your solution is safe to deploy?