

Roll No.

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M.Tech. (Sem. - 1st)

ADVANCED SOFTWARE ENGINEERING

SUBJECT CODE : CS-501

Paper ID : [E0681]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any Five questions.
- 2) All questions carry equal marks.

Q1) (a) To run the Software without any break in the services is becoming critical for any company. Also, they have to proactively synergize the frequent changes as per the market and user requirements. How the Software Engineering paradigm is changing with increasing complexity and demands of the software projects. Comment with proper examples and facts.

(b) Software requirement analysis is unquestionably the most communication intensive step in the software engineering process. Why does the communication path frequently break down?

Q2) (a) A particular software engineer and customer do not see eye-to-eye and their lack of trust during the requirements phase is jeopardizing the project. What issues would you explore to resolve the crisis?

(b) What are the fundamental issues in software design? How you will verify the goodness of the design.

Q3) Write short notes on the following:

- (a) Cohesion and coupling.
- (b) Black Box testing.
- (c) System Testing.
- (d) Code walkthrough.

Q4) Write a detailed note on SEI CMM. What are its different levels? How a company can move forward to higher levels of CMM. Use proper diagrams and examples.

Q5) (a) What is Six Sigma? How it helps in increasing the quality of your project/product.

(b) Define Software reuse. What are its merits and demerits? Discuss in detail.

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- Q6)** (a) Quality & reliability are related concepts, but are fundamentally different in many ways. Discuss. Can a program be correct & still not be reliable. Can a program be correct and still not exhibit good quality.
- (b) Software maintenance is even more important than the development. What care should be taken at the development time so that your software requires least maintenance?
- Q7)** (a) Framework of Web based applications requires more sophisticated approach to look at various things involved in the development of applications as compared to the normal off the web applications. Make your case.
- (b) How the UML is being used in software development and how it has changed the way of developing the projects.
- Q8)** Define and explain the following with the appropriate example wherever required
- (a) CASE Repository.
- (b) Configuration Testing.
- (c) Structure point.
- (d) Forward Engineering.