M. Tech. (Sem. - 1st)
ADVANCE 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) Current trends in software engineering are moving away from the waterfall model for large projects and moving toward iterative methods such as the spiral model? What are we gaining and losing as a result? Explain with suitable examples.

Q2) a)   Write a use-case for a withdrawal of money from a bank.

   b)   Describe the relationship between schedule, system features, and system cost.

Q3) Suppose a library system is being developed. The system has three major subsystems: one that handles the check-out/check-in transactions; one that handles inventories; and one that handles reports. During the development of the system, several problems occur. Identify the problems as errors, faults or failures.

Q4) a)   Explain the purposes and roles of function testing, performance testing, acceptance testing, and installation testing.

   b)   What is the difference between verification and validation? Which types of testing address verification? Which types of testing address validation?

Q5) a) Describe the differences between unit and integration testing. Give the goals for each type of testing and describe when and how each should occur.

b) Describe the differences between object-oriented and traditional testing.

Q6) Explain the relationship between the design and implementation. Why is it important to match the implementation to the design? What would you do to keep the two consistent?

Q7) Describe the different consumers of software requirements i.e. the different users, or types of users, of a software requirements document. For each consumer, explain how he or she would use the requirements, and how the requirements should be documented to make them useful for this consumer.

Q8) The project team developing a new system is experienced in the domain. Although the new project is fairly large, it is not expected to vary much from applications that have been developed by this team in the past. Which process model would be appropriate for this type of development?

a) Prototyping.
b) Waterfall.
c) V-model.
d) Spiral.

Justify your answer also explaining why other models not chosen by you are unsuitable.

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