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B. TECH.
(SEM IV) THEORY EXAMINATION 2018-19
SOFTWARE ENGINEERING

Time: 3 Hours**Total Marks: 70****Note: 1.** Attempt all Sections. If you require any missing data choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 7 = 14**

- (a) List the process maturity levels in SEI's CMM.
- (b) Compare evolutionary and throw away prototyping?
- (c) Draw the Context level DFD for the Safe home Software.
- (d) Distinguish between horizontal and vertical partitioning
- (e) Distinguish between verification and validation
- (f) Write short notes on equivalence partitioning
- (g) Define software re-engineering

SECTION B**2. Attempt any three of the following:****7 x 3 = 21**

- (a) Explain iterative waterfall and spiral model for software life cycle and discuss various activities in each phase.
- (b) Describe how software requirements are documented? State the importance of documentation.
- (c) Explain data architectural and procedural design for a software.
- (d) Describe decomposition levels of abstraction and modularity concepts in software design.
- (e) Define black box testing strategy. What do you mean by integration testing? Explain their outcomes.

SECTION C**3. Attempt any one part of the following:****7 x 1 = 7**

- (a) List several software process paradigms. Explain how both waterfall model and prototyping model can be accommodated in the spiral process model.
- (b) Which is more important-the product or process? Justify your answer

4. Attempt any one part of the following:**7 x 1 = 7**

- (a) Explain the feasibility studies. What are the outcomes? Does it have either implicit or explicit effects on software requirement collection
- (b) Narrate the importance of software specification of requirements. Explain a typical SRS structure and its parts.

5. Attempt any one part of the following:**7 x 1 = 7**

- (a) Explain about the various design concepts considered during design.
- (b) What are the characteristics of a good design? Describe different types of coupling and cohesion. How design evaluation is performed?

6. Attempt any one part of the following:**7 x 1 = 7**

- (a) What do you mean by boundary value analysis? Give two examples of boundary value testing.
- (b) What do you mean by system testing? Explain in detail

7. Attempt any one part of the following:**7 x 1 = 7**

- (a) Explain the need for software measures and describe various metrics
- (b) Write briefly on
 - i) CASE
 - ii) Software complexity measure.