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Paper Id: 110256 Roll No.

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.