

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.