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**B.TECH
(SEM IV) THEORY EXAMINATION 2017-18
SOFTWARE ENGINEERING**

Time: 3 Hours**Total Marks: 70****Note:** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

- a. What are the various categories of software?
- b. Highlight the activities in project planning.
- c. What are the characteristics of SRS?
- d. What are the objectives of architectural design?
- e. List the task regions in spiral model.
- f. Define risk and list its types.
- g. How will you test a simple loop?

SECTION B

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

- a. Describe the various phases of software development lifecycle?
- b. What do you mean by formal technical review? What is its significance in software development?
- c. Explain coupling in the context of software design.
- d. "System testing is considered as a pure black-box test". Justify your answer.
- e. Describe the COCOMO model. What is its significance?

SECTION C

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

- (a) What is a prototype model? Under what circumstances is it beneficial to construct a prototype model?
- (b) Define software engineering. Explain in brief about evolution of software.

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

- (a) Discuss the major advantages of object-oriented design approach over the function-oriented design approach.
- (b) Discuss the IEEE standard for SRS.

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

- (a) What do you mean by the term cohesion? Explain different types of cohesion.
- (b) Define software metrics. Why metrics are required in software? Discuss.

6. Attempt any *one* part of the following:

7 x 1 = 7

- (a) Discuss the white box testing in details.
- (b) What are test plan and test cases? Illustrate it by an example.

7. Attempt any *one* part of the following:

7 x 1 = 7

- (a) What are the important types of risk that a project might suffer from? How would you identify the risks that a project may be susceptible to during a project planning stage?
- (b) List the important shortcoming for LOC for use as a software size metric. Does the function point metric overcome this? Explain your answer.