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**TCS-302**

**B. TECH. (CSE) (THIRD SEMESTER)  
END SEMESTER EXAMINATION, 2019**

**SOFTWARE ENGINEERING**

**Time : Three Hours**

**Maximum Marks : 100**

**Note :** (i) This question paper contains five questions.

(ii) All questions are compulsory.

(iii) Instructions on how to attempt a question are mentioned against it.

(iv) Total marks assigned to each question are **twenty**.

1. Attempt any *two* parts of choice from (a), (b) and (c). (2×10=20 Marks)
  - (a) When you know programming, what is the need to learn software engineering concepts ? Briefly discuss the software process. Highlight the major software characteristics.
  - (b) Explain the Agile model used in software development in detail.
  - (c) Describing the software myths for software development, differentiate between Waterfall model and Prototyping model.
2. Attempt any *two* parts of choice from (a), (b) and (c). (2×10=20 Marks)
  - (a) How DFDs are used for analyzing software requirements ? Draw DFD Level-2 for any e-Commerce website like Amazon.
  - (b) Explain Decision Table testing with suitable example.
  - (c) What is SRS ? What are its major components ? List *five* desirable characteristics of a good SRS document.



(2)

3. Attempt any *two* parts of choice from (a), (b) and (c). (2×10=20 Marks)

(a) Write short notes on any *two* of the following :

(i) Structure Chart

(ii) Data Dictionaries

(iii) Use Case Diagrams vs. E-R-diagram

(b) What is abstraction ? Why is it necessary to maintain a good quality of software ?

(c) What is Object Oriented Design ? How is it different from Function Oriented Design ?

4. Attempt any *two* parts of choice from (a), (b) and (c). (2×10=20 Marks)

(a) Differentiate cohesion and coupling with suitable diagram.

(b) What is the difference between structured English and Pseudo Code ? Mentions some software analysis and design tools.

(c) What is the basis of Halstead complexity measure ? Mention the formula to calculate Cyclomatic complexity of a program.

5. Attempt any *two* parts of choice from (a), (b) and (c). (2×10=20 Marks)

(a) What are the Seven Principles of Software Testing ? Compare and contrast between Regression Testing and Re-testing ?

(b) Write the difference between Debugging and Testing. Compare Manual vs. Automated Testing ? Advantages of Automation Testing ?

(c) What is the difference between software engineering and conventional engineering ? Explain importance of software reengineering and software reverse engineering.