B.E. Computer Science & Engineering (Model Curriculum) Semester - V
# TEE1062CS / CE-I - Software Engineering

*2554*

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Notes : 1. All questions are compulsory.
2. All questions carry equal marks.
3. Due credit will be given to neatness and adequate dimensions.
4. Assume suitable data wherever necessary.

**1.** a) Give the definition of software engineering according to IEEE. "Software Engineering : A layered technology" – Explain.  **8**

b) What are different applications of software ? Explain in detail.  **8**

**OR**

**2.** a) What is software process ? Also explain process framework activities with software process framework diagram.  **8**

b) Explain incremental model with block diagram.  **8**

**3.** a) What is software measurement ? Explain size oriented metrics with example.  **8**

b) Given the following data :
No. of user inputs = 32
No. of user outputs = 60
No. of Inquiries = 24
No. of files = 08
No. of external interfaces = 2
Assume that all complexity values average and complexity adjustment values = 46
Compute the function point.  **8**

**OR**

**4.** a) What is software reengineering ? Explain software Reengineering process model with diagram.  **8**

b) Explain software Reengineering Activities.  **8**

**5.** a) What are the David Hooker's seven core principles that focus on software engineering process and practice.  **8**

b) Explain system engineering hierarchy in detail.  **8**

**OR**

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| **6.** | a) | Explain in detail product engineering hierarchy. | **8** |
| | b) | Explain all principles of software communication. | **8** |
| **7.** | a) | Explain the following terms with respect to requirement engineering.<br>i)  Inception              ii)  Elicitation<br>iii) Specification     iv)  Validation | **8** |
| | b) | Explain Class-Responsibility Collaborator (CRC) modeling with example. | **8** |

<div align="center"><strong>OR</strong></div>

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| **8.** | a) | Explain the following terms with respect to class-based modeling.<br>i)   Identifying classes and objects.<br>ii)  Specifying attributes<br>iii) Defining operations. | **8** |
| | b) | What are the different elements of the use-case diagram ? Draw use-case diagram for ATM machine. | **8** |
| **9.** | a) | Explain software testing strategy with diagram for conventional software. | **8** |
| | b) | What is white box testing ? Explain basis path testing in detail. | **8** |

<div align="center"><strong>OR</strong></div>

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| **10.** | a) | Explain in brief :<br>i)   Alpha testing<br>ii)  Beta testing | **8** |
| | b) | What is Black-box testing ? Explain boundary value analysis (BVA). | **8** |

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