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## Third Semester B.E. Degree Examination, Dec.2024/Jan.2025 Software Engineering

Time: 3 hrs.

Max. Marks: 100

**Note:** Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. What is Software Engineering? Explain software engineering code of Ethics. (10 Marks)
- b. With a neat diagram, explain the waterfall model of software development process. (10 Marks)

**OR**

- 2 a. With a neat block diagram, explain the spiral processing model. (10 Marks)
- b. What are attributes of good software? Explain the key challenges facing software engineering. (10 Marks)

### Module-2

- 3 a. Explain in brief links, association, ordering bags and sequences with an example each. (10 Marks)
- b. Explain following important terms with example : (10 Marks)
  - i) Identify
  - ii) Classification
  - iii) Inheritance
  - iv) Polymorphism.

**OR**

- 4 a. Explain generalization and inheritance with an example each. (10 Marks)
- b. Explain in brief class model, state model, and interaction model with an example each. (10 Marks)

### Module-3

- 5 a. What is system modelling? Explain the different perspective that the system model developed. (10 Marks)
- b. Explain model driven engineering in details and mention advantages and disadvantages. (10 Marks)

**OR**

- 6 a. With a neat diagram, explain context model with an example. (10 Marks)
- b. Explain event-driven model with a state diagram of microwave oven application. (10 Marks)

**Module-4**

- 7 a. What is test driven development? With a neat diagram, explain test driven development process. (10 Marks)  
b. With appropriate block diagram, explain the system evolution process. (10 Marks)

**OR**

- 8 a. Write and explain Lehman's laws related to system changes. (10 Marks)  
b. Explain reengineering process with a neat block diagram. (10 Marks)

**Module-5**

- 9 a. With a neat diagram, explain project scheduling process. (10 Marks)  
b. List and explain factors affecting software pricing. (10 Marks)

**OR**

- 10 a. Discuss in detail the different stages in component measurement process with diagram. (10 Marks)  
b. Explain plan driven development with a neat block diagram. (10 Marks)

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