

**SECTION -A**

Answer the following any FIVE Each question carrying 4 Marks

5 x 4 M = 20 M

- 1 Define Object-Oriented Programming (OOP) and list its features.
- 2) What is Unified Modelling Language (UML)? Mention its uses.
- 3) Define Software Development Life Cycle (SDLC).
- 4 What is a Use Case Diagram? Mention its purpose.
- 5 Define modularity and information hiding.
- 6) Write short notes on User Interface Design.
- 7) What is software testing?
- 8) Define software quality.

**SECTION -B**

Answer the following questions Each question carrying 10 Marks

5 x 10 M = 50 M

- 9 a) Explain the basic concepts of Object-Oriented Programming such as class, object, inheritance and polymorphism.

OR

- b) Explain the Software Development Life Cycle (SDLC) and its phases.

- 10 a) Explain Requirements Analysis and Specification in software engineering.

OR

- b) Explain the following UML diagrams with examples:

- Class diagram
- Sequence diagram
- Activity diagram

- 11 a) Explain the design process and design concepts such as abstraction, modularity and information hiding.

OR

- b) Describe User Interface Design and explain the Golden Rules of Interface Design.

- 12 a) Explain software testing strategies including unit testing and integration testing.

OR

- b) Explain white box testing techniques such as basis path testing and control structure testing.

- 13 a) Explain risk management in software engineering and describe risk identification and risk mitigation.

OR

- b) Explain software quality concepts, including McCall's Quality Factors and Software Quality Assurance.