C10-R4: SOFTWARE SYSTEMS

NOTE :

1.	**Answer question 1 and any FOUR from questions 2 to 7.**
2.	**Parts of the same question should be answered together and in the same sequence.**

Time: 3 Hours **Total Marks: 100**

1. (a) Describe the layered technologies of software development.

   (b) Distinguish between data and information.

   (c) What do you understand by software prototyping?

   (d) What is UML Package Diagram?

   (e) Explain in brief about Re-engineering.

   (f) Explain the model based specifications in software systems.

   (g) Discuss about Object Oriented (OO) Metrices.

(7x4)

2. (a) What is data dictionary? What are the objectives of data dictionaries? Explain types of data items in it.

   (b) Describe about ADL (Architecture Description Languages) with respect to software architecture.

(9+9)

3. (a) Describe about activity diagram and state diagram.

   (b) Enlist and explain various software characteristics.

(8+10)

4. (a) Explain the generic views of software engineering.

(b) Define the terms:

(i) Software Reliability

(ii) Software Re-use

(9+9)

5. (a) Explain the role of UML in software architectures.

(b) What is an E-R Diagram? Explain the same with an example.

(c) Define requirements engineering and draw the flowchart stating the steps of the process.

(6+6+6)

6. (a) What are functional and non-functional requirements for software?

(b) Develop a use case for the ATM system.

(9+9)

7. (a) Explain about OO Methodologies.

(b) Discuss about the limitations of following software life cycle models in brief :

(i) Prototype Model

(ii) Incremental Model

(iii) Waterfall Model

(9+9)

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