

B33-R4 : SOFTWARE ENGINEERING AND CASE TOOLS

NOTE :

1. Answer question no. 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) Explain Reverse and Forward Engineering.
 - (b) What is User Interface Design? Explain in brief?
 - (c) Discuss the term Software Quality. List importance of Software Quality Assurance.
 - (d) What do you mean by term Data Dictionary?
 - (e) Explain the differences between Software Process and Software Process model.
 - (f) Why Software Maintenance is Important?
 - (g) Define the term error, bug, fault and failure and describe how they are related to each other. (7x4)

2.
 - (a) List the Different Testing Strategies. What do you understand by black box testing? Explain.
 - (b) Write an Importance of Software Requirement Specification Document? Explain characteristics of System Requirement Specification.
 - (c) The relationship between Software Configuration Management (SCM) and Software Maintenance? Explain in brief. (6+6+6)

3.
 - (a) Define Reverse Engineering and Re-Engineering. Differentiate between Reverse Engineering and Re-Engineering.
 - (b) Define the term Computer Aided Software Engineering (CASE). Describe the types and advantages of CASE tools.
 - (c) Discuss the different Styles of Architecture, which we normally follow to design our system. Explain in detail about any four architectural styles. (6+6+6)

4.
 - (a) Briefly highlight the difference between "code walk-through" and "code inspection". Compare the relative merits and demerits of the same.
 - (b) Explain Change Control and Version control Process in detail.
 - (c) What are cohesion and coupling in modular design? How are they different from each other ? (6+6+6)

5.
 - (a) What are the attributes and principles of a good software design?
 - (b) What do you mean by software Quality? Discuss factors that affect Software Quality.
 - (c) What do you mean by Software Agent? Explain the basic need of Software Agent? (6+6+6)

6. (a) Draw a Use Case Diagram for Library management system.
(b) What is the difference between Object Oriented Programming and Procedural Programming?
(c) Discuss merits and demerits of ISO 9001 and SEI CMM certification. **(6+6+6)**
7. (a) Define the Term Validation and Verification. Differentiate Validation and Verification.
(b) What is the meaning of Software Maintenance? Which are the different types of Maintenance Software Product might need? Why is such Maintenance required?
(c) Draw a Context diagram and Data Flow Diagram (DFD) for Airlines Reservation System. **(6+6+6)**

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