

B3.3-R4 : SOFTWARE ENGINEERING AND CASE TOOLS

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) Define the term Software Crisis. Also write its causes (any three).
(b) Explain any four black box testing techniques.
(c) Write any four differences between verification and validation ?
(d) What is the dual role of software in software engineering ?
(e) List Object-Oriented Analysis (OOA) principles.
(f) Differentiate between cohesion and coupling.
(g) What are CASE work benches ? How are they useful ?

(7x4)
2. (a) Differentiate between incremental and evolutionary model of software development using suitable diagrams.
(b) What is an Entity Relationship diagram ? Write the uses of ER diagrams.

(12+6)
3. (a) Briefly describe each component of Software Requirements Specification (SRS) document format.
(b) What do you understand by Object Oriented Design (OOD) in software engineering ? Briefly explain the various terms/concepts used in OOD.

(9+9)
4. (a) What do you understand by CASE and CASE Tools ? Write any three advantages and three disadvantages of the CASE approach.
(b) Briefly explain the various types of testing used in software development.

(9+9)
5. (a) What do you understand by user interfaces ? Briefly explain the phases of user interface design process.
(b) What do you understand by software configuration and software configuration management ? State the need for and importance of software configuration management.

(9+9)
6. (a) What does CMM stand for in software engineering ? Also, briefly describe the various levels of CMM.
(b) What is meant by the term "Software Maintenance" ? What is the need for maintaining software ? What are the different types of software maintenance.

(9+9)
7. (a) What do you understand by UML ? How is it useful in software engineering ? List and write the different structural diagrams available in UML.
(b) What do you understand by the term software reuse ? What are the different components of software that can be reused ? List the various advantages of software reuse.

(9+9)

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