

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) What is the difference between Object Oriented Programming and Procedural Programming ?
(b) Why Evolutionary models are considered as best model in modern context ?
(c) What is the layered technology in software engineering ?
(d) Describe the concept of concurrent development model.
(e) What is the difference between structural testing and functional testing ?
(f) Define the Term Software Agent. Discuss the need of Software Agents.
(g) List out characteristics of software and justify why software doesn't wear out. (7x4)
2. (a) What is the importance of Requirement Gathering ? Explain Functional and Non-functional requirements with example.
(b) What is Reverse Engineering ? What is its relevance to Software Development ?
(c) What is Software Configuration ? Why does one have to Manage it ? (6+6+6)
3. (a) What is the content of the design document ? Explain the cohesion and coupling concepts in the context of the software design.
(b) What is objective of User-Interface design ? List and explain Standard guideline for GUI design.
(c) The library management system should be able to handle requests for membership, issue and return of books as well as handle purchase of books from the suppliers. Draw a context level Data Flow Diagram (DFD) and level-0 Data Flow Diagram for a Library Management System. (6+6+6)
4. (a) What is the difference between Product Life Cycle and Project Life Cycle ?
(b) What is the aim of testing ? Which are the various types of testing ?
(c) Discuss the difference between verification and validation and explain why validation is particularly difficult. (6+6+6)
5. (a) What do you understand by the terms integrated CASE environment and CASE workbenches ?
(b) Draw a use case diagram for a bank ATM transaction.
(c) List importance of Software Quality Assurance. (6+6+6)

6. (a) Define the Term Controlling and Monitoring. Explain Version Control and Change Control.
(b) Write a short note on Incremental process model.
(c) Describe the differences between Software Construction and Software Deployment. **(6+6+6)**
7. (a) List the various phases of Software Development Life Cycle and the various planning tools required in each phase.
(b) What is CMM ? Describe its levels & compare it with ISO 9001.
(c) Explain the Concept of abstraction, inheritance and polymorphism with example. **(6+6+6)**

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