No. of Printed Pages : **2**

Sl. No.

B3.3-R4 : SOFTWARE ENGINEERING & 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 SDLC ? Explain the various phases of SDLC in a software project ?

(b) Explain Software Configuration Management.

(c) Differentiate between Cohesion and Coupling.

(d) What is the difference between object-oriented analysis (OOA) and object-oriented design (OOD) ?

(e) What is the importance of Code review technique in a software life cycle ?

(f) Explain the meaning of formal requirements specification ?

(g) Differentiate between functional and non-functional requirements with an example. **(7x4)**

2. (a) "SRS is known as the black-box specification of system". Comment on the statement.

(b) Differentiate between DMAIC and DMADV methodology of Six Sigma.

(c) How is a System Design different from a Logical Design ? Explain. **(6+6+6)**

3. (a) What do you mean by the term "software metric" ? What are the characteristics of good software metric ?

(b) What are the various activities performed during a software measurement process ? Elaborate.

(c) What is meant by the term "software reliability" ? Explain. **(6+6+6)**

4. (a) Differentiate between the terms Software Reverse Engineering and Software Reengineering.

(b) What is performance testing ? Discuss the different types of performance testing ?

(c) "Programming language coding standards are very significant in improving quality of a computer program". Justify the statement. **(6+6+6)**

5. (a) What are the different phases of the prototyping model for software development ? Explain.

(b) What is a Unified Process model for software engineering ?

(c) Differentiate between Software Agent and Program with an example. **(6+6+6)**

6. (a) "A software development company has been accredited with level 3 of SEI CMM". Comment on its current quality practices.

(b) What is the difference between integrated CASE environment and CASE workbenches ?

(c) What is the importance of documentation on a software product ? Discuss the different ways of documenting a software product. **(6+6+6)**

7. Write short notes on the following :

(i) DFD

(ii) Equivalence Partitioning

(iii) KPA

(iv) Code Reuse

(v) Use Case Diagram

(vi) ISO 9001 certification **(6x3)**

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