

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) Explain the differences between Software product and software process.
 - b) Describe System Software.
 - c) Describe Software Architecture and Architectural Analysis.
 - d) Why SRS is most important in SDLC?
 - e) What is the difference between Object Oriented Programming and Procedural Programming?
 - f) List different types of CASE tools.
 - g) Why do we need Coding Conventions?

(7x4)

2.
 - a) Describe the basic principles of the Cleanroom Process.
 - b) Explain the importance of Component based Software Engineering.
 - c) Explain software metrics for maintenance.

(6+6+6)

3.
 - a) What do you understand by Reverse Software Engineering?
 - b) Explain user documentation for Software Application. How do we organise it?
 - c) Describe Software Reliability Analysis.

(6+6+6)

4.
 - a) What do you understand by Formal Specification?
 - b) Describe Graphical User Interface and Interface Design.
 - c) Describe release management and explain the role of release manager.

(6+6+6)

5.
 - a) Differentiate between Software Agent and Program.
 - b) Differentiate between Functional Testing and System Testing.
 - c) Describe all levels of CMMI.

(6+6+6)

6.
 - a) What is Change Control Process? Explain.
 - b) Explain Code Reuse. List its types.
 - c) Draw a Use Case Diagram for ATM banking.

(6+6+6)

7.
 - a) What is Software Measurement? Explain.
 - b) Describe DMAIC and DMADV methodology of Six Sigma.
 - c) Differentiate between System Design and Logical Design.

(6+6+6)