2072
B.E. (Computer Science and Engineering)
Fourth Semester
CS-404: Software Engineering

Time allowed: 3 Hours   Max. Marks: 50

NOTE: *Attempt* <u>*five*</u> *questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I.   Attempt the following:-

   a) State difference between verification and validation.

   b) What is alpha and beta testing?

   c) What is the role of CCB?

   d) What are major challenges in software engineering?

   e) How the reliability of software is assessed? Discuss different parameters. (5x2)

UNIT - I

II. a) Explain various types of COCOMO models. Explain about the phase wise distribution of efforts to calculate cost, schedule, and staff of project. Assume organic type of project.

   b) Explain the notations used in drawing DFD and class diagram along with suitable example of each.   (2x5)

III. a) Explain the features of Agile software development method and compare it with traditional SDLC model.

   b) Explain the various components of SRS.   (2x5)

IV. a) Explain various types of coupling.

   b) Write note on validation of SRS.   (2x5)

UNIT - II

V.   Differentiate among functional and structural testing. Explain in detail the one testing technique used for functional and structural testing.   (10)

P.T.O.

VI.   a) What are the different metrics used for software maintenance and design?

b) Explain the various CASE standards.   (2x5)

VII.   Write note on the following:-

   a) Coupling v/s cohesion

   b) State transition diagrams

   c) Deployment diagram

   d) Regression testing   (4x2½)

x-x-x