Exam.Code:0916
Sub. Code: 6784

1019
B.E. (Computer Science and Engineering)
Fourth Semester
CS-404: Software Engineering

Time allowed: 3 Hours **Max. Marks: 50**

***NOTE**: Attempt five 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) Discuss the concept of extreme programming.

b) Compare the usage of sequence diagrams and state transition diagrams.

c) Which type of CASE tools are UML tools? Justify your answer.

d) Differentiate between component and use case diagrams.

e) Distinguish between the terms "System Engineering" and "Software Engineering".

f) How is software engineering different from ad-hoc software development?

g) Define the terms Project Velocity and Spike Solutions.

h) Demonstrate coupling between two classes using some source code.

i) How to compute cyclomatic complexity?

j) What do you mean by Critical Path in scheduling of a project? (10x1)

UNIT – I

II. Compare Agile and Rapid Application Development Models. Discuss their respective pros and cons. Also analyse their suitability for various types of projects using real case studies. (10)

III. a) Design a Software Requirement Specification (SRS) document for a real life example of a project.

b) Discuss the relevance of Software Engineering in real world and analyse various challenges present in Software Engineering. (5,5)

IV. a) Implement Object-Oriented Analysis and Design paradigm for a real life project.

b) Compare the concept of "coupling and cohesion" in structured design and object-oriented design respectively using suitable examples. (10)

UNIT – II

V. Demonstrate cost estimation for a project using COCOMO model. Also, discuss the changes that have been made in COCOMO - II model in comparison to the original COCOMO model. (10)

P.T.O.

VI. Analyse and compare various types of integration testing techniques. Also discuss the concept of smoke testing. (10)

VII. Explain various software metrics used for each phase of software development life cycle. (10)

x-x-x