

4E4163

Roll No.

Total No of Pages: **3**

4E4163

B. Tech. IV Sem. (Main/Back) Exam., June/July-2014
Computer Science and Engineering
4CS4A Software Engg.

Time: 3 Hours

Maximum Marks: 80

Min. Passing Marks: 24

Instructions to Candidates:-

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/ calculated must be stated clearly.

Use of following supporting material is permitted during examination.

(Mentioned in form No.205)

1. _____

2. _____

UNIT-I

Q.1 (a) What is system? Differentiate between system Engineering and Software Engineering. [3+3=6]

(b) Discuss major problems in System development. [5]

(c) List and describe characteristics of a good Software. [5]

OR

Q.1 (a) What is SDLC? Explain DOD and MIS Oriented SDLC models in brief. [8]

(b) Explain System level project planning in detail. [8]

[4E4163]

Page 1 of 3

[10540]

UNIT-II

Q.2 (a) Define the following:

- (i) Software
- (ii) Software Engineering
- (iii) Software processes
- (iv) Software Process model

[2×4=8]

(b) Explain incremental process model. Justify that it is appropriate for business Software Systems but less appropriate for real time Systems. [8]

OR

Q.2 (a) With the help of neat diagram, explain Boehm's spiral model. [10]

(b) Spiral model can support both change avoidance and change tolerance. Explain. [3]

(c) Give merits and demerits of spiral model. [3]

UNIT-III

Q.3 (a) Define software requirement Engineering. [3]

(b) What are functional and non- functional Software System requirements? [5]

(c) Explain Finite State Machine (FSM) Models. [8]

OR

Q.3 (a) Describe how to prepare a Software requirement specification (SRS) document. List possible Users and Use of SRS for each User. [8]

(b) Explain Data Flow and Control flow diagrams with Suitable example. [8]

UNIT-IV

- Q.4 (a) What is Software design? [4]
(b) What are architectural and Procedural Software designs? Explain. [12]

OR

- Q.4 (a) Discuss preparation of Software Design Document. What is Significance of Design document? [8]
(b) What is Software Coding? Describe programming style and program Quality in Context of Software coding. [8]

UNIT-V

- Q.5 (a) Discuss object oriented Analysis (OOA) and modeling in detail. [8]
(b) Explain Object oriented design Concepts and methods. [8]

OR

- Q.5 (a) What is UML? [1]
(b) Explain the following in context of UML
(i) Use case Diagrams.
(ii) Sequence Diagrams.
(iii) Classes and objects.
(iv) Interfaces.
(v) State Diagrams. [3×5=15]