

**4E2919**

Roll No. : \_\_\_\_\_

Total Printed Pages : **3****4E2919**

**B. Tech. (Sem. IV) (Main / Back) Examination, June/July - 2013**  
**Computer Science & Information Tech.**  
**4CS5 Software Engineering**

Time : 3 Hours]

[Total Marks : 80

[Min. Passing Marks : 24

*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. NIL2. NIL**UNIT - I**

1 (a) What are the steps of system development life cycle (SDLC)? Describe each step briefly.

**2+6=8**

(b) Discuss the problems that occur while developing the system and suggest the possible solutions.

**8****OR**

1 (a) You have heard of people discussing system. What are the system and system analysis? Explain both.

**2+6=8**

(b) Write down the short notes on : System specification.

**8****UNIT - II**

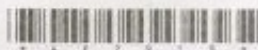
2 (a) Compare waterfall model and spiral model for software development. Which one will you prefer and why?

**4+1+3=8**

(b) Explain the prototype model? Under what circumstances is it beneficial to construct a prototype model?

**5+3=8****OR**

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[Contd...

- 2 (a) Describe the software development life cycle (SWDLC). Also explain its different phases. 2+6=8
- (b) State advantages and disadvantages of evolutionary process model. 8

**UNIT - III**

- 3 (a) Elaborate all requirement analysis principles. 4
- (b) What do you understand by data dictionary ? Where and how it is used ? 2+1+1=4
- (c) Describe characteristics of a SRS. 4
- (d) Describe facilitated application specification technique (FAST). 4

**OR**

- 3 (a) Write short note on following : Finite State Machine (FSM). 8
- (b) Draw a DFD for a hotel management system. Explain each part briefly. 8

**UNIT - IV**

- 4 (a) What is software design ? How will you translate the analysis model into Design model ? Also explain the design principles in brief. 1+4+3=8
- (b) (i) Explain modularity in context of software design. 2
- (ii) What are the various module types ? 2
- (iii) Explain cohesion and coupling in modular design. 4

**OR**

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[Contd...

- 4 (a) What is quantifying program quality ? With the help of your own Hypothetical example, explain a method of quantifying programming quality. 8
- (b) Explain any two architectural styles of software design in brief. 4
- (c) Explain procedural design in brief. 4

**UNIT - V**

- 5 (a) Explain Object Oriented (OO) concept with an example. 8
- (b) Describe the class - responsibility - collaborator (CRC). 8

**OR**

- 5 (a) Explain the differences between structural and OO analysis with the help of suitable example. 6
- (b) What is UML ? How it is useful in OO modeling ? 2+2=4
- (c) Describe the unified approach to OO design. 6