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Total No of Pages: 3

### 3E1140

B. Tech. III - Sem. (Main / Back) Exam., Dec. 2019
PCC Computer Science & Engineering
3CS4-07 Software Engineering
Common For CS, IT

Time: 3 Hours

Maximum Marks: 120

#### Instructions to Candidates:

Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may 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)

I. NIL

2. NIL

## PART - A

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(Answer should be given up to 25 words only)

 $[10 \times 2 = 20]$ 

### All questions are compulsory

- Q.1 Define system engineering?
- Q.2 Mention the three key elements of software engineering.
- Q.3 What is the objective of various model in software engineering?
- Q.4 Define the merits of the various model in software engineering.
- Q.5 Why accuracy is important in the data dictionary?

- Q 6 What is behavior modeling?
- Q / What is a finite state machine model?
- Q x Why design documentation is important in software engineering?
- () 9 Write the objective of software project planning
- ().10 What is sequence diagram in the context of UML?

### PART - B

### (Analytical/Problem solving questions)

[5×8=40]

### Attempt any five questions

- Describe the Computer Based system as an organizational information system with an example.

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- Q.2 Explain the software development life cycle with a diagram.
  - Q.3 What do you understand by data dictionary where and how it is used?
  - (4) Explain the object modular radiation with example.
  - Q.5 What is SDLC? Explain the MIS oriented SDLC model?
- Q.6 Explain COCOMO estimation model in software project management.
- 4.7 What is UML? Explain how it is useful in object oriented modeling.

### PART-C

# (Descriptive/Analytical/Problem Solving/Design Questions)

[4×15=60]

### Attempt any four questions

Q.1 Discuss merits and demerits of various models of software development.

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- Q.2 Write a short not on a Finite State Machine (PSM).
- Q.3 Explain object oriented analysis and its approach and explain classes and object relationship model.
- Q.4 Explain major elements of DFD & CFD.
- Q.5 Explain the use case diagram and state diagram in the context of UML.

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