

Total No. of Questions : 8]

SEAT No. :

**PB4397**

**[6261]-37**

[Total No. of Pages :2

**S.E. (Computer Engineering) (AI & DS)**

**SOFTWARE ENGINEERING**

**(2019 Pattern) (Semester- IV) (210253)**

*Time : 2½ Hours ]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary.

- Q1)** a) What is project scheduling? Explain in brief about the basic principles guiding the s/w project scheduling. [6]
- b) What is the need of project Estimation? What are the steps while estimation of software? [6]
- c) How are LOC and FP used during Project Estimation? Explain any one with suitable example. [6]

OR

- Q2)** a) What is the difference between COCOMO and COCOMO II Model? [6]
- b) What is the necessity of Estimation? How estimation with Use-cases is performed? [6]
- c) What is the need for defining a software scope? What are the categories of software engineering resources (Project Resources)? [6]

- Q3)** a) Explain the following design concepts: [6]
- i) Abstraction
  - ii) Patterns
  - iii) Modularity
- b) What is meant by coupling and cohesion. Explain these terms in relation with good software design. [6]
- c) What is the importance of software design? What are types of design classes? [5]

OR

**P.T.O.**

- Q4)** a) Explain in detail the Architectural design and Component level design elements. [6]  
b) What is software Architecture? What is architectural context diagram? [6]  
c) Write short note on 'Interface analysis and design models'. [5]

- Q5)** a) Briefly explain the steps involved in risk planning in project development. [6]  
b) Describe with an example how the effect of risk on project schedule is evaluated using PERT. [6]  
c) Explain Version Control and Change Control Layer in Software Configuration Management in detail. [6]

OR

- Q6)** a) Discuss Software Configuration Management in detail. [6]  
b) Define Software Risk in detail. What are different types of Software Risk? [6]  
c) Discuss the RMMM plan in detail. [6]

- Q7)** a) What are the guidelines those lead to a successful software testing strategy? [6]  
b) What is meant by integration testing? Explain top down and bottom up integration testing. [6]  
c) What is the difference between verification and validation? [5]

OR

- Q8)** a) Differentiate between black box testing and white box testing. [6]  
b) Explain how Object oriented software testing is different from conventional software testing. [6]  
c) Explain Unit Testing and Integration Testing with respect to the Object Oriented Context. [5]

