

Total No. of Questions : 10]

SEAT No. :

**P3231**

**[5461]-272**

[Total No. of Pages : 2

**B.E. (Computer Engineering)**

**SOFTWARE DESIGN METHODOLOGIES AND TESTING**

**(2012 Pattern) (Semester - II) (End Sem.) (410449)**

*Time : 2½ Hours]*

*[Max. Marks :70*

*Instructions to the candidates:*

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
- 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 are “include relationship” in use cases? Explain with suitable example and use case diagram. **[5]**

b) Draw a sequence diagram for Online feedback system by a student for a teacher. **[5]**

OR

**Q2) a)** What is the role designing in any system or project implementation? Explain model based software design and development. **[5]**

b) Explain different degrees of multiplicity of association between classes with suitable example. **[5]**

i) One-to-One Association

ii) Many-to-Many Association.

**Q3) a)** Explain the real time software architecture with suitable example. **[5]**

b) Explain the intent, motivation, applicability, implementation and consequences of observer pattern? **[5]**

OR

**Q4) a)** What is singleton pattern? Explain one example scenario where you will singleton pattern to get applied. **[5]**

b) Explain Web Service Protocols in brief. **[5]**

*P.T.O.*

- Q5)** a) What is defect management? Discuss the generic steps in defect management process? [8]  
b) What is validation? Explain various levels of validation? [8]

OR

- Q6)** a) Explain V test model with suitable block diagram? State its significance in software development process. [8]  
b) Discuss the essential features of modern defect management tool? [8]

- Q7)** a) Explain top down and bottom integration testing. [6]  
b) What is unit testing? List the benefits of unit testing. [6]  
c) Briefly explain different types of functional system testing. [6]

OR

- Q8)** Write short notes on: [18]  
a) Performance Testing.  
b) Alpha beta Testing.  
c) Cyclomatic Complexity.

- Q9)** a) What are different challenges in mobile testing? Explain MonkeyTalk tool. [6]  
b) What is functional testing? Explain its types? [6]  
c) What is the purpose of JUnit? [4]

OR

- Q10)** a) What is automated testing? What are the selection criteria of automated testing tool? [6]  
b) What are different components of selenium testing tool? [6]  
c) Explain GUI Testing. [4]

