

[5155]-16

**M.E. (Computer Engineering)**  
**ADVANCED SOFTWARE ENGINEERING**  
**(2008 Pattern) (Semester - I) (Elective - I)**

*Time : 3 Hours]*

*[Max. Marks : 100*

*Instructions to the candidates:-*

- 1) Answers to the two sections should be written in separate answer books.*
- 2) Answer any three questions from each section.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Figures to the right indicate full marks.*
- 5) Assume suitable data if necessary.*

**SECTION - I**

- Q1)** a) Explain the system engineering process. **[8]**  
b) State the dimensions of dependability and explain. **[8]**
- Q2)** a) Explain the spiral model for software development. **[8]**  
b) Explain the data flow models with an example. **[8]**
- Q3)** a) Explain the control models for event driven systems. **[8]**  
b) Explain the real time system modeling with a state machine. **[8]**
- Q4)** Explain the following. (Any three) **[18]**  
a) Concurrent objects  
b) Transaction processing system  
c) UI design process  
d) Prototyping

## **SECTION - II**

- Q5)** a) Explain path testing method. [8]  
b) Explain in brief the COCOMO II models for estimation. [8]
- Q6)** a) Explain change management process. [8]  
b) How agile process models adapt changes in software? Explain with a process model. [8]
- Q7)** a) Explain the Risk analysis process. [8]  
b) How reliability for critical system is predicted? Explain. [8]
- Q8)** Explain the following (Any three) [18]  
a) Fault detection  
b) Process Improvement  
c) Black box testing  
d) Design pattern

