

( 3 Hours )

[ Total Marks : 100

N.B. : (1) Question No. 1 is compulsory.

(2) Solve any **four** questions from **remaining**.(3) Assume **suitable** data wherever **necessary**.

1. Design Domain-Specific Software Architecture (DSSA). For the Theater Ticket Management system. Assume suitable entities, attributes etc. Domain model must consists following :-
  - (a) Domain Dictionary and Information Model. 10
  - (b) Feature Model and Operational Model. 10
2. (a) Explain with a suitable example the event type connector and its variation dimensions. 10
- (b) Define the following terminology :- 10
  - (i) Configuration
  - (ii) Architectural style
  - (iii) Architectural patterns
  - (iv) Accuracy and precision
  - (v) Views and viewpoints.
3. (a) Define Architectural analysis. Discuss various analysis goals with an example ? 10
- (b) Explain with an example stakeholder driven modeling. 10
4. (a) Explain various designing issues for following non-functional properties :- 10
  - (i) Efficiency and Complexity
  - (ii) Scalability and Hetrogeneity.
- (b) Discuss Service-Oriented Architectures (SOA) and Web Services. 10
5. (a) Explain with the help of suitable diagram Architectural Trade-off Analysis Method (ATAM). 10
- (b) Explain the existing frameworks for the pipe-and-filter and C2 Architectural style. 10
6. (a) Discuss an Architectural Conception in Abscence of Experience. 10
- (b) Explain with an example Software System Mobility and Architecture. 10
7. Write short note on (any two) :- 20
  - (a) Decentralized Architectures
  - (b) REST
  - (c) Software Architecture and Deployment
  - (d) Lightweight G2 Framework.