Q.P. Code : 814702

(3 Hours)   [Total Marks : 80

N.B. : (1) Question number 1 is compulsory.
(2) **Attempt** any **three** from the remaining.
(3) Assume suitable data.

1. a) Design Domain-Specific Software Architecture (DSSA) for an Entertainment   20
System (Amusement park etc.). Assume suitable entities, attributes etc.
Domain Model must consists of following:
a) Domain Dictionary and Information Model
b) Feature Model and Operational Model.

2. a) What types of applications are applicable for the following styles and give   10
examples of each
   i.   Event based,
   ii.   Pipe and filter
   iii. Layered
   iv. Blackboard
   v.   Mobile code

   b) What is a mapping problem in implementation? Differentiate between one   10
way and round trip mapping.

3. a) Discuss service oriented architecture (SOA) and web services.   10
   b) Explain various features of xADLs used as modeling language.   10

4. a) Discuss various analysis goals with an example.   5
   b) Explain MVC Architectural pattern and give an example of an application   10
where it is used.
   c) Explain simulation based software.   5

5. a) Explain with an example software system mobility and Architecture.   10
   b) Explain with the help of suitable diagram architectural trade off analysis   10
method (ATAM).

[TURN OVER]

6.   Write a short note **(Any 2)** :-   20
   a)   Ambiguity, Accuracy and precision in the characterization of Architectural
        Models.
   b)   Different Dimensions of dependability.
   c)   XTEAM