

Registration no:

--	--	--	--	--	--	--	--	--	--

Total Number of Pages: 2

**M.TECH**  
**CSPC 103**

**First Semester Regular/Back Examination – 2015-16**

**OBJECT ORIENTED SYSTEM**

**BRANCH-CSE**

**Time: 3 Hours**

**Max marks: 70**

**Q.Code-T1043**

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

- Q1 Answer the following questions: (2 x 10)
- a) What is the purpose of object ID in object oriented system design?
  - b) How deployment diagram is useful to locate software component?
  - c) Write down the guidelines for developing effective documentation.
  - d) What is the extensibility mechanism used in UML?
  - e) Differentiate Dynamic modeling from static modeling with an example.
  - f) With proper example, explain about AND substate and OR substate in a state transition diagram.
  - g) What are gates in sequence diagram? What are entry and exit gates?
  - h) What is the need of Access layer classes?
  - i) With the help of an example, explain dynamic concurrency.
  - j) List the steps of Micro development process of Booch Methodology.
- Q2 a) Briefly discuss the detail UML architecture, their components and functionality with suitable example. (5)
- b) A customer decides to upgrade his PC and purchase a DVD player. He begins by calling the sales department of the PC vendor and they tell him to talk to customer support. He then calls customer support and they put him on hold while talking to engineering. Finally, customer support tells the customer about several supported DVD options. The customer chooses a DVD and it is shipped by the mail department. The customer receives the DVD, installs it satisfactorily and then mails his payment to accounting. (5)
- Construct an activity diagram for this process. Use swim lanes to show the various interactions
- Q3 a) Draw a class diagram using the UML syntax to represent the fact that an order register consists of many orders. Each order consists of up to ten order items. Each order item contains the name of the item, its quantity and the date by which it is required. Each order items described by an item order specification object having details such as its vendor addresses, its unit price and manufacturer. (5)

- b) What is the importance of use case diagram? Explain the relationships between use cases with suitable example and proper UML notations. (5)
- Q4 a) Briefly explain the concept of packages in advanced structural modelling. (5)  
 b) Briefly explain the various metrics for object oriented testing. (5)
- Q5 a) Differentiate Object Oriented Analysis and Object Oriented Design in unified approach. (5)  
 b) Discuss different type of object Relational mappings with suitable examples. (5)
- Q6 a) What is the significance of state transition diagram in object oriented analysis and design? Draw a state transition diagram to depict the following: (5)  
 An object of type Join Thread creates three objects of class Thread-Demo t1, t2 and t3 with the parameters 'First', 'Second' and 'Third' passed in the constructors respectively. Creation of the object is asynchronous. Upon creation, each object call its own run () method asynchronously. The Join Thread object send a synchronous message is Alive () to each of three objects. Then Join Thread object sends an asynchronous join () message to each of the three objects. Using the concept of synchronous and asynchronous messages, depict the above scenario in a sequence diagram.
- b) Explain the concept of Generalization and Aggregation for the development of OOS. (5)
- Q7 a) Give an idea of implementing multitier architecture using COM/DCOM technology. Explain the concept of CORBA in this regard. (5)  
 b) Briefly explain the concept of Submachine Reference state in state transition diagram. (5)
- Q8 Write short notes on any two of the following: (5 x 2)  
 a) Pattern  
 b) Class Oriented metrics  
 c) Framework  
 d) Subclass Partitioning.