

**C 61590**

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Name \_\_\_\_\_

Reg. \_\_\_\_\_

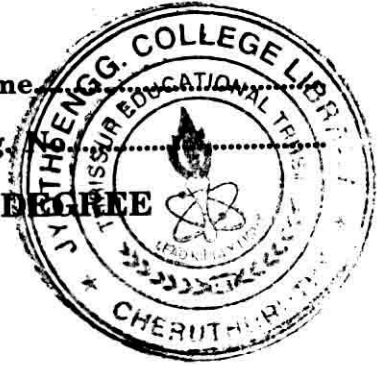
**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE  
EXAMINATION, APRIL 2014**

(2009 Scheme)

**IT 09 405-DATA MODELLING AND DESIGN**

Time : Three Hours

Maximum : 70 Marks



**Part A**

*Answer all questions.*

1. Enumerate any four data types supported by Java programming language along with the memory space occupied by it.
2. What do you mean by aggregation ?
3. What is an interface ?
4. What do you mean by a role ? Give suitable example.
5. Enumerate the components of architectural model.

(5 × 2 = 10 marks)

**Part B**

*Answer any four questions.*

1. Mention the benefits of object oriented programming over procedure oriented programming.
2. Discuss in detail about the structural model.
3. Draw the representation of a package in UML.
4. Explain in detail about interfaces in UML.
5. With a neat diagram explain state machine model.
6. Discuss about the deployment diagram with example.

(4 × 5 = 20 marks)

**Part C**

*Answer all questions.*

1. Explain in detail about the basic concepts of Object Oriented Programming.

*Or*

2. Discuss in detail about the process of exception handling in Java Programming Language.

**Turn over**

3. Explain in detail about the following concepts in UML :—

(a) Interfaces.

(b) Roles.

*Or*

4. Elaborate the structural model in UML.

5. For a typical Banking Sector example, identify the actors and use cases involved in it. Develop a use case diagram for the same

*Or*

6. Explain in detail about activity diagram with a neat sketch. Also explain the components involved in building an activity diagram.

7. Explain in detail about different architectural styles involved in data modeling and design

*Or*

8. With a neat sketch explain the component diagram and its components.

(4 × 10 = 40 marks)