Con. 3767-10.   **(REVISED COURSE)**   **AN–4315**

(3 Hours)   [Total Marks : 100]

N. B. :   (1)   Question no. **1** is **compulsory**.

        (2)   Attempt any **four** questions out of remaining **six** questions.

        (3)   Make **suitable** assumptions whenever **necessary** and state them.

1.   Construct the use case diagram and class diagram for the following scenario :   **20**
student information sytem. The university conducts many courses and students
can register for those courses. The registrar of the university will introduce any
new course. Also the registar maintains the curriculum and students details. The
examination will be conducted for the students and the degree is issued for the
students who have completed the course successfully.

2.   Explain the following terms with example.   **20**

        (a)   Inheritance

        (b)   Aggregation

        (c)   Abstraction

        (d)   Association.

3.   (a)   Explain process of design and its principles.   **10**

        (b)   Explain different types of test scenarios for Library Management System.   **10**

4.   (a)   State different types of coupling and cohesion. Explain any four types of both   **10**
coupling and cohesion.

        (b)   What is functional model? Explain different steps that are performed in   **10**
constructing functional model.

5.   (a)   Construct the activity diagram for Hospital Management System.   **10**

        (b)   What is the difference between include and extends ? Explain with example.   **10**

6.   (a)   Write detailed note on "Frame Work and Components".   **10**

        (b)   What is a sequence diagram ? What are the elements used in sequence   **10**
diagram ? Explain each.

7.   (a)   Construct the state diagram and component diagram for the on line Railway   **10**
Reservation System.

        (b)   How deployment diagrams are useful in modelling a fully distributed system ?   **10**