

189375

No. of Printed Pages : 4

BICSE-010

**B. TECH.-VIEP-COMPUTER SCIENCE
AND ENGINEERING (BTCSVI)**

Term-End Examination

June, 2019

BICSE-010 : DATA MODELLING AND UML

Time : 3 Hours

Maximum Marks : 70

Note : Answer any seven questions. All questions carry equal marks. Assume suitable missing data, if any.

1. Explain Object model, Dynamic model and Functional model. Discuss the requirement of each model with diagrams, examples and their respective notations. 10
2. What is a class diagram ? To which model it belongs ? What are the components of class diagram ? Draw class diagram for Hospital Management System. 10

(A-8) P. T. O.

3. What is Aggregation ? Justify the statement "Aggregation is a special type of association." How does aggregation differ from generalization ? Give suitable example in support of your discussion. 10
4. What is extended relationship ? How is it different from include relationship ? Briefly discuss the utility of both with the help of suitable example. 10
5. What is sequence diagram ? Discuss the notations used to draw the sequence diagram. Describe the utility of sequence diagram. Draw sequence diagram for Railway reservation system. 10
6. (a) What is prototyping ? Discuss the role of prototyping in object oriented modelling. 5

- (b) Explain the term concurrency in dynamic modelling. Briefly discuss the types of concurrency. 5
7. Differentiate between the following : 10
- (a) Object oriented analysis and object oriented design
- (b) Abstract class and concrete class
- (c) Binary association and ternary association
- (d) Association and link
8. Discuss boundary class, control class and event class with suitable example of each. Name the diagrams related to these classes. Discuss the role of each class along with their notations. 10
9. (a) Is use case diagram related to data flow diagram ? Justify your answer. 5

- (b) Is there any relationship between data flow diagram and entity relationship diagram ?
Justify. 5
10. (a) Draw use case diagram for library management system. 5
- (b) Draw state chart diagram for online booking of air tickets. 5