25091

M.Sc. DEGREE EXAMINATION, APRIL 2018.

COMPUTER SCIENCE

SECOND SEMESTER

Paper I – OBJECT ORIENTED MODELING AND DESIGN

Time : Three hours Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each questions carries 3 marks.

1. Give an introduction to object-oriented modelling and design.
2. Illustrate the concept of multiple inheritance.
3. Specify the role and purpose of data flow diagrams in dynamic modelling.
4. Differentiate functional modelling and object modelling.
5. Give an overview of system design.
6. Give an overview of object design.
7. Describe the issues involved from design to implementation.
8. Discus the limitations of non-object-oriented languages.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each questions carries 15 marks.

Each answer should not exceed 6 pages.

9. Write on the following with an example.

   (a) Generalization

   (b) Association classes

   (c) Abstract classes.

Or

10. Describe the UML notation for the class diagram with an example. Explain the concept of link, association and inheritance.

11. Discuss about the events, states and operations of dynamic modelling.

Or

12. Discuss about the object modelling technique and its impact on software system development.

13. Compare and explain the three methodologies/models of object design with illustration.

Or

14. Why software architecture is so important in system design? Enlist and explain the different architectural styles.

15. Explain the following concept related to programming style.

    (a) Reusability

    (b) Extensibility

    (c) Robustness

Or

16. How the object-oriented languages used in translating the design into implementation? Explain.