

(Following Paper ID and Roll No. to be filled in your Answer Books)

PAPER ID :

Roll No.

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M.C.A.**Theory Examination (Semester-IV) 2015-16****OBJECT ORIENTED SYSTEMS***Time : 3 Hours**Max. Marks : 100***SECTION-A****Q1: Attempt All of the following: (10×2=20)**

- What do you mean by modeling? What are the purposes of modeling?
- What is Object Modeling Technique?
- Define Applet.
- How event handling is done in JAVA?
- What is JDBC?
- Define concept of Object & Class.
- What is byte code?
- Differentiate between the concept of link & association.
- Why java is known as platform independent language?
- Discuss relation of functional model and object model.

SECTION-B**Q2: Attempt any FIVE of the following: (5×10=50)**

- What are operations and methods in Object Model? Explain with suitable example. Also write the OMT notation of operations and methods with respect to object model.
- A directory file contains information about files in a directory, including both ordinary files as well as other directory files. Prepare an object diagram which models directory files and ordinary files. Use a directory plus a file name as a qualifier.
- What is multiplicity? Explain with the help of an example. Also explain the various OMT notations used in multiplicity.
- Explain the following terms:
 - Abstraction
 - Polymorphism

iii. Encapsulation

- e) What do you mean by states? Explain the difference between states and events with proper example.
- f) Draw the state diagram of :
- i. A telephone call
 - ii. Chess Game
- g) What is Transition and Guarded Transition? How Guarded Transition is different from simple transition? Explain with proper diagram.
- h) What is concurrency? What is Aggregation Concurrency in Dynamic model? Explain aggregation concurrency with proper diagram.

SECTION-C

Attempt any TWO of the following: (2×15=30)

- 3.** Explain any **THREE** of the following terms:
- (a) Dynamic Billboard Applet
 - (b) Lavatron Applet
 - (c) Java Swing
 - (d) Java Bean
 - (e) Scrabblets
- 4.** Compare the following:
- (a) OMT methodology with SA/SD methodology
 - (b) OMT methodology with JSD methodology.
- 5.** (a) What is multithreading? Explain Thread life cycle.
(b) What is constructor? Explain its types with proper example.