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

PAPER ID : 0113 Roll No. | | | | | | | | | | |

B.Tech.

(SEM. III) ODD SEMESTER THEORY EXAMINATION 2013-14

OBJECT ORIENTED SYSTEMS

Time : 3 Hours *Total Marks : 100*

Note :–Attempt **all** questions.

1. Answer any **two** parts : **(10×2=20)**

(a) (i) Describe the terms object, class, subclass, super class and abstraction with an example.

(ii) Why are the complex software systems designed by using the object oriented approach rather than procedural approach ? Discuss.

(b) (i) Discuss the concepts of Link and associations with suitable example. What is their role in object oriented design ? Explain.

(ii) What is an abstract class ? What is the significance of an abstract class in object modeling ? Explain.

(c) (i) Discuss the concept of generalization with suitable example.

(ii) Describe the terms Meta data and candidate keys with example.

2. Answer any **two** parts : **(10×2=20)**

(a) What do you mean by scenario ? What is the purpose of it in object oriented design ? Discuss. Also place the following event classes into a generalization hierarchy with inheritance of event attribute : pick operation, character pick, line pick, circle pick.

(b) What do you mean by a state diagram ? Three phase induction motors will spin either clockwise or counterclockwise, depending on the connection to the power line. In applications requiring motor operations in both directions, two separate contactors (power relays) might be used to make the connections, one for each direction. Also, in some applications of large motors, the motor starts through a transformer that reduces the impact on the power supply. The transformer is bypassed by a third contactor after the motor has been given enough time to come up to speed. There are three momentary control inputs : request for forward, reverse, or off. When the motor is off, forward or reverse requests cause the motor to start up and run in the requested direction. A reverse request is ignored if the motor is starting or running in the forward direction, and vice versa. An off request at any time shuts the motor off. Make a state diagram for one possible motor control with proper explanation.

(c) (i) Discuss the synchronization control and concurrent activities with the help of state diagram.

(ii) Write a short note on event generalization with suitable diagrams.