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**[4968]-5004**

**B.C.A. (Fifth Semester) EXAMINATION, 2016**  
**OBJECT ORIENTED SOFTWARE ENGINEERING**  
**(2013 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 80**

**N.B. :-** (i) All questions are compulsory.

(ii) Neat diagrams must be drawn whenever necessary.

(iii) Figures to the right indicate full marks.

**1.** Attempt any *eight* of the following : [8×2=16]

(a) Consider a single object “Credit Card” and draw object diagram with possible attributes.

(b) Define polymorphism.

(c) Which symbol is used to show notes ?

(d) Define binary association.

(e) What is the purpose of use case view ?

(f) Define model of system.

(g) Define an elaboration phase during analysis.

(h) Define object oriented testing.

(i) Define data management component.

P.T.O.

2. Attempt any *four* of the following : [4×4=16]
- (a) Explain different elements of object model.
  - (b) What is meant by object design process ?
  - (c) What is meant by aggregation ? Explain it with an example.
  - (d) What is qualifer ? Explain with example.
  - (e) What do you mean by unified process ?

3. Attempt any *four* of the following : [4×4=16]
- (a) Explain concurrency and subsystem allocation.
  - (b) Explain use of component diagram.
  - (c) Explain iterative development with *two* advantages.
  - (d) Explain any *four* generic steps for object oriented analysis.
  - (e) Give any *four* applications where uml can used.

4. Attempt any *four* of the following : [4×4=16]
- (a) What is multiple inheritance ? Explain with example.
  - (b) Define Fork and Join.
  - (c) Discuss object oriented design process.
  - (d) What do you mean by task management component ?
  - (e) Define Types and Role.

5. Attempt the following :

A system for distributing email over a network is needed. Each user of the system should be able to send mails from any computer. All the received mails are shared at central server; the user can

receive mail at any computer. One or two larger data spaces allow saving message in files. There should be provisions for forwarding mails and sending it to several users at once using an address list.

Considering above situation, model the system using UML techniques and draw the following diagram by supporting specification, if required :

- (a) Class diagram [4]
- (b) Use case diagram [4]
- (c) Sequence diagram [4]
- (d) Component diagram [4]

*Or*

Deployment diagram [4]