Total number of printed pages – 4

2019

BCA

6th Semester Examination

OOAD using UML

Paper – 3201

Full Marks – 100

Time : 3 Hours

The questions are of equal value for any group / half.

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

1. **Answer any five questions :** 14×5

   (a) What is the purpose of object modelling ? What types of constructs are used in object modelling ? Explain. 2+4+2

   (b) What are the various methods of breaking a system into sub-system ? 6

2. (a) How does object oriented approach differ from the traditional approach ? Why the reusability important ? How does object oriented software development achieve and improve reusability ? 3+2+2

(b) Is UML a programming language ? Is it process dependent or independent ? State name of all UML diagrams. Identify each of the UML diagrams belong to structural and which of these belong to behavioural group. 1+1+5

3. (a) Differentiate active, passive and transient object in sequence diagram. Draw sequence diagram for 'process transaction', use case of ATM based banking system. 7

(b) What is the activity diagram ? Explain in brief with a suitable example. 7

4. What do you mean by advanced structural modeling ? How it is different from basic structural modeling ? Discuss in detail the various tools used in basic structural modelling. 14

5. (a) Discuss four-layer Meta Model Architecture. 7

(b) Draw use case diagram for online railway ticket reservation system and explain. 7

6. (a) What are the importance of using UML diagram ? 7

(b) Define the purpose of following terms with suitable example and UML notations with respect to class model. 7

(i) Qualified association

(ii) Association class

(iii) Aggregation

(iv) Multiplicity

(v) Constraint

(vi) Derived data

(vii) Package

7. Differentiate between : $3\frac{1}{2} \times 4$

(i) Process and Thread

(ii) *Cohesion and Coupling*

(iii) Black box and White box testing

(iv) Generic class and Abstract class

8. Write short notes on (any **two**) : 7×2

(a) Layered architecture

(b) SDLC

(c) SRS

(d) Deployment diagram

[Internal Assessment – 30 marks]