NEW

2018

BCA

6th Semester Examination

OOAD USING UML

PAPER—3201

Full Marks : 100

Time : 3 Hours

The figures in the right hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Answer any *five* questions.

1. (a) What is an object ? What is the main advantage of object-oriented development ? What is object-oriented system development methodology ? Distinguish between method and message in object. 1+2+3+2

(b) What is object-oriented analysis and design ? What are the primary gout in the design of UML ? 2+4

2. (a) Briefly explain following characteristics of object-oriented systems :

classification,

identity,

inheritance,

encapsulation,

polymorphism,

sharing,

synergy. 7×1

(b) Is UML a programming language ? Is it process dependent or independent ? Write the names of all UML diagrams. Identify each of the UML diagrams belong to structural and which of these belong to behavioral group.

1+1+2+3

3. (a) What is an Association ? What is Generalization ? What are Composition and Aggregation ? 2+2+2+2

(b) Explain UML Activity diagram. 6

4. (a) What is system reduce diagram ? What is Software Architecture ? What is UML class diagram ?

2+2+2

(b) Explain in details about UML interaction diagram.

8

5. (a) What is cohesion and coupling ? 4

(b) Explain component diagram in details. 10

6. (a) What is the importance of use case diagram ? Explain relationships between use cases with suitable example and proper UML notations. Draw use case diagram for an 'online railway ticket reservation system'. 7

(b) Explain the steps/criteria for finding right associations and right attributes for preparing domain class model in brief. 7

7. (a) What is abstract class ? What is concrete class ? Explain abstract class and abstract operation with example.

7

(b) Explain redundant class, irrelevant classes, vague classes in domain class model. 7

8. Write short notes : $4 \times 3\frac{1}{2}$

(a) Component diagram,

(b) Non-functional requirements,

(c) Signal and event,

(d) Layered architecture.

[Internal Assessment : 30]

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