

2019

Time : 3 hours

Full Marks : 80

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

The questions are of equal value.

*Answer any **five** questions in which Q. No. 1 is compulsory.*

1. Choose the correct answer of the following :

   (a) Which of the following is a building block of UML ?

   (i) Things

   (ii) Relationship

   (iii) Diagram

   (iv) All of these

   (b) Which things are dynamic part of UML models ?

   (i) Structural things

(ii) Behavioural things

(iii) Grouping things

(iv) Annotational things

(c) What is an object ?

(i) An object is an instance of a class

(ii) An object includes encapsulation of data

(iii) An object is not an instance of a class

(iv) All of these

(d) A class is divided into which of these compartments ?

(i) Name compartment

(ii) Attribute compartment

(iii) Operation compartment

(iv) All of these

(e) An operation can be described as :

(i) Object behaviour

(ii) Class behaviour

(iii) Function

(iv) Object and class behaviour

(f) What does a simple name in UML class and object consists of ?

(i) Letters

(ii) Digits

(iii) Punctuation characters

(iv) All of these

(g) Which diagram in UML is used to describe the physical components their distribution and association ?

(i) Component diagram

(ii) Object diagram

(iii) Deployment diagram

(iv) Interation diagram

(h) Key elements of use-case diagrams are :

(i) People, computer

(ii) Actors, use cases

(iii) People, classes and object

(iv) Uses, cases

2. What is UML ? What is its goal ? Discuss the important features of UML.

3. What is use-case diagram ? What are the components of a use-case diagram ? Explain include and extend relationship between use cases.

4. What is a class diagram ? What are its major components ? Draw a class diagram for student enrollment system.

5. What is an Obejct ? How can you represent an object in UML ? Discuss various techniques for identifying objects in UML.

6. What is Aggregation ? Explain different types of Aggregation with suitable example.

7. What is Dynamic Behaviour ? How can you implement dynamic behaviour in Java ?

8. What is Rule ? How can you document rules in UML ?

9. Write short notes on any **two** of the following :
   (a) Use case scenario
   (b) Attributes
   (c) Active and passive objects
   (d) Software Reusability
   (e) Implementing Static Behaviour