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BICSE-005

DIPLOMA – VIEP – COMPUTER SCIENCE AND ENGINEERING (DCSVI)

00535

Term-End Examination
June, 2014

BICSE-005 : OBJECT MODELING AND DESIGN

Time : 2 hours *Maximum Marks : 70*

Note : *Answer any* ***five*** *questions. Question no. 1 is compulsory.*

1. Choose the correct answer : *7×2*

(a) Which statement is true about elements within the subsystem and public visibility ?

(i) Only the subset of elements that define the subsystems API should have public visibility.

(ii) Only the subsystem proxy class should have public visibility.

(iii) No elements inside the subsystem should have public visibility.

(iv) Only the elements that reference external classes should have public visibility.

(b) Which task is performed during use-case realization refinement ?

(i) identify participating classes

(ii) allocate responsibilities among classes

(iii) model message between classes

(iv) mode associated class relationships

(c) In the state of state machine, a behaviour can be defined as

(i) before reaching a state

(ii) upon reaching a state

(iii) upon leaving a state

(iv) inside a state

(d) When identifying design elements, a simple analysis class will map to a(n)

(i) active class

(ii) interface

(iii) sub-system

(iv) design class

(e) In which OOAD activity is the distribution mechanism identified ?

(i) Identify design elements

(ii) Class design

(iii) Identify design mechanisms

(iv) Architectural analysis

(f) Identify design elements is part of which workflow detail ?

(i) Candidate architecture

(ii) Design components

(iii) Perform architectural

(iv) Refine the architecture

(g) Class is a

(i) group of objects

(ii) template for objects of a particular type

(iii) a class of objects

(iv) a classification of objects

2. (a) What is the UML approach of software development life cycle ? Explain the various phases of software development life cycle. 7

(b) Draw and explain the class diagram of business objects in the design model. 7

3. (a) Enumerate the steps to model the distribution of responsibilities in a system. 7

(b) What is meant by message sequencing ? Discuss its importance. 7

4. (a) Draw and explain class diagram and object diagram of the railway reservation system. 7

(b) Define an event. Explain the classification of events in brief. 7

5. (a) State the various categories of messages that can be specified in a sequence diagram. Explain with the help of suitable examples. 7

(b) Explain Interaction diagrams in detail. 7

6. (a) Distinguish between forward engineering and reverse engineering. 7

(b) Explain the role of package in structural modelling with the help of suitable example. 7

7. (a) Draw and explain the use-case diagram to model the behaviour of cellular phone. 7

(b) Explain the concept of Synchronization in UML. 7

8. Explain about the following : $4 \times 3\frac{1}{2}$

(a) Interface

(b) Association

(c) Thread and process

(d) Time and space