BICS-035

DIPLOMA – VIEP – COMPUTER SCIENCE AND ENGINEERING (DCSVI)

Term-End Examination

June, 2016

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BICS-035 : JAVA BASIC AND OBJECT MODELING DESIGN

Time : 2 hours   *Maximum Marks : 70*

Note : *Attempt any* **five** *questions. Question no. 1 is* **compulsory***. All questions carry equal marks.*

1. (a)   A compound statement is

   (i)   A collection of one or more statements enclosed in braces

   (ii)   A statement involving if and else

   (iii) A way of declare variables

   (iv)   A way of setting the value of a variable

   (b)   The following is an example of a Boolean expression :

   (i)   x = 6

   (ii)   m1.setText ("Hello")

   (iii) cause == bYes

   (iv)   70

(c) A function is

    (i) An entity that receives input and output

    (ii) A way of storing values

    (iii) A sequence of characters enclosed by quotes

    (iv) A kind of computer

(d) Class diagrams at conceptual level should include

    (i) Attributes only

    (ii) Operations only

    (iii) Both (i) and (ii)

    (iv) None of the above

(e) Declarations must appear at the start of the body of a JAVA method. (T/F)

(f) The modulus operator (%) in JAVA can be used only with variables of integer type. (T/F)

(g) Object of a subclass can be assigned to a super class reference. (T/F)   *7×2=14*

2. (a) Describe the different types of control statements of JAVA with examples.   7

   (b) What is polymorphism ? Describe the various types of polymorphism with diagrams.   7

3. (a) Explain the conceptual model of UML. 7

(b) What are the rules for abstract classes ? Explain abstract classes and abstract methods. 7

4. (a) Explain the use of try and catch in JAVA with examples. 7

(b) Define aggregation and generalization with examples. 7

5. (a) Explain the advantages of object oriented programming languages. 7

(b) Draw a use-case diagram to model the behaviour of a cellular phone. Explain briefly. 7

6. (a) What is the purpose of a class diagram ? Explain. 7

(b) Explain activity diagram with a suitable example. 7

7. Using generic classes, write a program to show the following operations on an array :

(a) Add an element at the end and at the beginning. 7

(b) Delete an element from a given location. 7

8. Write short notes on any *four* of the following : $4 \times 3\frac{1}{2} = 14$

   (a) Importance of Modelling

   (b) Inheritance and its types

   (c) Functional Modelling

   (d) Packages in JAVA

   (e) Deployment Diagram

   (f) Metadata

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