No. of Printed Pages : 3 **BICS-035**

DIPLOMA VIEP COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

December, 2013

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) Attributes and methods that are visible from any method in any class are said to be : **7x2=14**

(i) Private

(ii) Protected

(iii) Public

(iv) None of these.

(b) Who developed Java language ?

(i) Ken Thomson.

(ii) Bjarne Stroustrup.

(iii) Dennis Ritchie.

(iv) James Gosling.

(c) The default return datatype in function definition is :

(i) int

(ii) float

(iii) char

(iv) double

(d) Which one is the invalid relationship in use case diagrams ?

(i) Use.

(ii) Generalization.

(iii) Subtyping.

(iv) Extend.

(e) Interface classes are means through which the attributes interface with instances of an entity. (True/False)

(f) Sequence diagrams can also capture concurrent activities. (True/False)

(g) More Advanced state diagrams are drawn for multiple objects. (True/False)

2. (a) What are the key features of Java? Explain the concept of byte code in Java. 7

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

3. (a) Write a program in JAVA to display the first 10 natural numbers and their sum. 7

(b) What is exception handling ? Explain the use of try and catch in JAVA. 7

4. (a) Define abstraction, aggregation and generalization. 7

(b) Describe use case driven approach (OOSE) by Jacobson. 7

5. (a) Explain the relationship between object and dynamic models. 7

(b) What is multiplicity in associations ? Explain multiplicity with example. 7

6. (a) Describe various UML diagrams and state purpose of each diagram in brief. 7

(b) Draw collaborative diagram for issuing book from a library. 7

7. (a) Describe the principles of package diagram that decides which class will go in same package. 7

(b) Explain deployment diagram with example. 7

8. Write short notes on the following **(any four)** :

(a) Activity diagram.
(b) State chart diagram. **3.5x4=14**
(c) Functional modeling.
(d) Multiple Inheritance.
(e) Metadata.
(f) Packages in Java.