BRAINWARE UNIVERSITY

Term End Examination 2018 - 19

Programme – Bachelor of Computer Applications

Course Name – Object Oriented Technologies

Course Code - BCA402

(Semester – 4)

Time allotted: 3 Hours   **Full Marks : 70**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group –A

(Multiple Choice Type Question)   10 x 1 = 10

1. *Choose the correct alternative from the following*

(i)   Which of the following is a type of polymorphism in Java?

    a. Compile time   b. Binding time

    c. Hierarchical   d. Multilevel

(ii) Which of these keywords can be used to prevent method over-riding in Java?

    a. constant   b. final

    c. protected   d. static

(iii) Which of these methods of class String can be used to extract a single character from a String object?

    a. CharAt( )   b. Charat( )

    c. charAt( )   d. None of the above

(iv) What would be the result if a class extends two interfaces and both have a method with same name and signature?

    a. run-time error   b. compile-time error

    c. code will run successfully   d. code will give different result at different times

(v)   Which of the below is invalid identifier with the main method?

    a. void   b. final

    c. Public   d. static

(vi)   Which method returns a reference to the currently executing thread object?

    a. runningThread()   b. currentThread()

    c. runnableThread()   d. None of the above

(vii)   JRE stands for

    a. Java Runtime Environment   b. Java Runtime Entity

    c. Java Rapid Environment   d. None of these

(viii)   Which of these can be used to fully abstract a class from its implementation?

    a. package   b. objects

    c. inheritance   d. interfaces

(ix)   Which of these values can a Boolean variable contain?

    a. 0 & 1   b. True & false

    c. Either a or b   d. None of these

(x)   JDBC stands for

    a. Java Database Connectivity   b. Java Database Connection

    c. Java to DB Console   d. None of the above

Group – B

(Short Answer Type Questions)   3 x 5 = 15

Answer any *three* from the following

2.   Write down the steps to compile and run a java program.   [5]

3.   What do you mean by bytecode in Java. Discuss briefly three features of java.   [2 + 3]

4.   Write down advantages of inheritance.   [5]

5.   Define abstract methods and abstract class. Give example code snippet.   [5]

6.   Write a simple java program to print sum of integers taken as command line arguments.   [5]

Group – C

(Long Answer Type Questions)   3 x 15 = 45

Answer any *three* from the following

7. (a) Explain the concept of runtime polymorphism in Java citing proper sample code.   [8]

    (b) Explain how classes and packages are supporting the mechanism of encapsulation in Java.   [7]

8. (a) What is a thread in Java? Discuss about thread life cycle.   [6]

    (b) Give one example of abstract method and abstract class in Java.   [2]

    (c) Illustrate the concept of abstract class in Java citing proper sample code.   [4]

    (d) What are the features of a constructor method in Java?   [3]

9. (a) What is the difference between error and exception?   [2]

    (b) Explain with code syntax, how exception is handled in java?   [8]

    (c) What are the utility of "throw" and "throws" keywords? Give example code.   [5]

10. (a) With suitable diagram, explain applet life cycle.   [8]

    (b) Write a simple applet program to display a rectangle. Also state the method of running the applet.   [4 + 3]

11. (a) How interfaces can be used to implement multiple inheritance in Java. Explain with illustrative example code.   [6]

    (b) Explain applet life cycle in Java.   [4]

    (c) What is the use of try and catch block in Java? Can a program contain more than one catch block?   [4+1]