BRAINWARE UNIVERSITY

Term End Examination 2018 - 19

Programme – Bachelor of Science (Honours) in Computer Science

Course Name – Object Oriented Technologies

Course Code - BCS201

(Semester – 2)

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 invalid identifier with the main method?

    a. void   b. final

    c. Public   d. static

(ii) Which keyword returns a reference to the current object?

    a. this   b. now

    c. here   d. super

(iii) Which is not a valid method of applet?

    a. update(Graphics g)   b. paint(Graphics g)

    c. Init()   d. kill()

(iv) How does java exhibits multiple inheritance?

    a. Through interface and implements keyword   b. Through class and extends keyword

    c. Through interface and extends keyword   d. Through class and implements keyword

(v) Which of the following is true about abstract and final keyword?

    a. A method can be made abstract and final simultaneously.

    b. A class can be made abstract and final simultaneously.

    c. Method and class can not be made abstract and final simultaneously.

    d. final keyword can not be used with class and methods.

(vi) Which of these is a mechanism for naming and visibility control of a class and its content?

    a. interface

    b. object

    c. package

    d. applet

(vii) Which inheritance is not supported in java through Extends keyword?

    a. Multilevel

    b. Multiple

    c. Hierarchical

    d. Single

(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 the following is not a thread life cycle method?

    a. start()

    b. run()

    c. sleep()

    d. runnable()

(x) Which of the following package stores all the standard Java classes?

    a. lang

    b. util

    c. java

    d. None of these

Group – B

(Short Answer Type Questions)   3 x 5 = 15

Answer any *three* from the following

2. Discuss the various ways in which an object of class String can be created in Java citing proper code snippet.   [5]

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

4. Discuss the advantages of inheritance property.   [5]

5. Give an example to show how inheritance is implemented in java.   [5]

6. Write a simple java program to draw a rectangle in an applet.   [5]

Group – C

(Long Answer Type Questions)   3 x 15 = 45

Answer any *three* from the following

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

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

8. (a) In how many ways Threads can be created in java? Discuss with example.   [6]

    (b) Discuss about join() method.   [4]

    (c) Write a java program to copy the content of a file to another file.   [5]

9. (a) State two usage of "this" keyword in Java.   [2]

    (b) Explain the role of "super" in connection to inheritance of classes in Java with   [8]
         proper sample code.

    (c) How method overloading is different from method overriding in Java?   [5]

10. (a) What do you mean by a class and an object in Java? Explain the concept of
         instance variable hiding in Java with example code.   [2+6]

    (b) Discuss the various characteristic features of object-oriented programming.   [7]

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

    (b) Write down the differences between abstract class and interface.   [4]

    (c) How exceptions are handled in java. Give example code snippet to illustrate.   [4+1]