Professional Course Examination, November 2018

(5th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Course : BCA–501

(Introduction to Java Programming)

(Revised)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 15)

Tick (✓) the correct answer in the brackets provided : 1×10=10

1. Variables declared and used inside methods are called

(a) class variables ( )

(b) local variables ( )

(c) instance variables ( )

(d) global variables ( )

2. _____ provides all the tools, executables and binaries required to compile, debug and execute a Java program.

(a) JVM ( )

(b) Applet ( )

(c) JDK ( )

(d) JRE ( )

3. Which one is not included in Java API package?

(a) awt ( )

(b) orl ( )

(c) applet ( )

(d) io ( )

4. The string method "**s1.concat(s2)**"

(a) concatenates s1 and s2 ( )

(b) copies s1 to s2 ( )

(c) replaces s1 with s2 ( )

(d) moves s1 to s2 ( )

5. Run-time error occurs when

(a) missing semicolon ( )

(b) using undeclared variables ( )

(c) there is bad reference to object ( )

(d) dividing an integer by zero ( )

6. An exception is a condition that is caused by

(a) compile error ( )

(b) run-time error ( )

(c) logical error ( )

(d) OS error ( )

7. Read( )

(a) reads a byte from the output stream ( )

(b) reads a byte from the input stream ( )

(c) reads file data ( )

(d) writes data to output stream ( )

8. All classes and interfaces for Java collection framework are contained in

(a) java.awt ( )

(b) java.io ( )

(c) java.util ( )

(d) java.net ( )

9. A Java program that can be embedded into Web page is

(a) applet ( )

(b) iterator ( )

(c) AWT ( )

(d) thread ( )

10. Button, text field and label are contained in

(a) .GUI component classes ( )

(b) .GUI container classes ( )

(c) .Layout manager ( )

(d) .Custom graphics classes ( )

Indicate whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark in the brackets provided : 1×5=5

1. Instance and class variables are declared inside a class.

(T / F)

2. Interfaces are used as superclasses.

(T / F)

3. Most run-time errors occur due to typing mistakes.

(T / F)

4. Java.io provides system input and output through data streams.

(T / F)

5. AWT is not platform dependent.

(T / F)

SECTION—B

(*Marks* : 10)

Answer the following questions : 2×5=10

1. What do you mean by tokens?

2. Explain wrapper classes.

3. What is multithreaded programming?

4. Explain output stream.

5. Explain applet tag.

(PART : B—DESCRIPTIVE)

(*Marks* : 50)

The figures in the margin indicate full marks for the questions

1. *(a)* What is JVM? Is it platform independent? Explain. 4

(b) Explain the different OOPS concepts in Java. 6

OR

(c) Explain the different features of Java. 4

(d) What is nesting of methods in Java? Write a Java program to show nesting of methods. 6

2. *(a)* Explain the different steps involved in creating arrays. 4

(b) Explain the concept of packages in Java. What are the different Java API packages? 6

OR

(c) What do you mean by string array? Write a Java statement to create and use arrays that contain strings. 4

(d) What is the function of interfaces in Java? Explain with a simple program to show the use of interfaces in Java. 6

3. *(a)* What do you mean by errors? Explain the different types of errors in Java. 4

(b) What is exception? Write down the difference between errors and exceptions. 6

OR

(c) What is thread? Explain the steps involved in extending the thread class. 4

(d) Briefly discuss the life cycle of a thread. 6

4. *(a)* Explain the concept of stream in Java. What are the two types of byte stream classes? 4

(b) Explain file class. Write down the different operations of file class. 6

OR

(c) Write down the main difference between set and list implementation in Java. 4

(d) Explain in brief the concept of iterator in Java. 6

5. *(a)* What is applet? Explain the benefits of using applets. 4

(b) Discuss the life cycle of applet. 6

OR

(c) What are the different types of control supported by Java AWT? 4

(d) What is Java AWT? Write down the Java AWT hierarchy. 6

★ ★ ★