

V/BCA/501

2016

(5th Semester)

BACHELOR OF COMPUTER APPLICATION

Paper No. : BCA-501

(Introduction to Java Programming)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

*The figures in the margin indicate full marks
for the questions*

1. (a) How is Java strongly associated with the Internet? 2
- (b) Write and explain any three features of Java. 3
- (c) Discuss the different levels of access protection available in Java. 5

Or

- (d) What are command-line arguments? 2
- (e) List out the differences between Java and C++. 3
- (f) What is a constant? Explain the different types of constant. 1+4=5

G7/191a

(Turn Over)

(2)

2. (a) What are the similarities and dissimilarities between an interface and a class? 2
- (b) What is a vector? What are the advantages of using vectors over array? 1+2=3
- (c) What is a package? What are the benefits of using package? 1+4=5

Or

- (d) Why is wrapper classes needed in Java? List all the wrapper classes for converting simple data types. 1+1=2
- (e) What is an array? Explain with example, how to create and initialize a one-dimensional array. 1+2=3
- (f) By giving example, explain how to add a class to a package, and hide certain classes from accessing outside of the package. 2+3=5
3. (a) What is an exception? Explain how exceptions are handled, using try and catch. 2+3=5
- (b) Describe the complete life cycle of a thread. 5

(3)

Or

- (c) What is multithreading? Explain the two ways of creating new threads with an example. 1+6=7
- (d) Write a program to create your own exception to throw error when the age of a person is below 18 years. Assume other necessary details for the person to be recruited in army. 3
4. (a) What is a file? State the steps involved in creating a disk file. 1+1=2
- (b) Describe the most commonly used classes for handling I/O related exceptions. 3
- (c) What are byte stream classes? What are the two kinds of byte stream classes? 1+4=5

Or

- (d) Differentiate between array and list. Which of them is faster? Justify your reasons. 4+2=6
- (e) Write a program to implement insertion and searching in map. 4
5. (a) What is an applet? What are the two types of applet? 1+1=2
- (b) List the differences between applet and application program. 3
- (c) Describe the different stages in the life cycle of an applet. 5

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(Turn Over)

(4)

Or

- (d) Write the differences between text field and text area classes. Give example. 2
- (e) What are dialog boxes? Write a simple program that demonstrates the use of file dialog. 1+2=3
- (f) Name and explain the different types of AWT control. 5

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Paper No. : BCA-501

(Introduction to Java Programming)

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—I

(Marks : 15)

1. Tick (✓) the correct answer in the brackets provided :

1×10=10

(a) The first application written in Java was

(i) Netscape Navigator ()

(ii) HotJava ()

(iii) Applet ()

(iv) Oak ()

(b) Which of the following is not Java keywords?

(i) Transient ()

(ii) Finally ()

(iii) Union ()

(iv) Throws ()

(c) If 'str' of string type has the value 'Java Programming', the statement below will return

str.substring (5,12)

(i) programming ()

(ii) program ()

(iii) Java P ()

(iv) Java program ()

(d) Set of classes for implementing graphical user interface belongs to which package?

(i) Java.util ()

(ii) Java.long ()

(iii) Java.applet ()

(iv) Java.awt ()

(e) Which of the following methods blocked a thread for a specified time?

(i) sleep() ()

(ii) suspend() ()

(iii) wait() ()

(iv) stop() ()

(f) Which of the access modifiers enjoys the highest degree of protection?

(i) Protected access ()

(ii) Private access ()

(iii) Private protected access ()

(iv) Friendly access ()

(g) Which will legally declare, construct and initialize an array?

(i) int [] my List = {"1", "2", "3"}; ()

(ii) int [] my List = (5, 8, 2); ()

(iii) int my List [][] = {4, 9, 7, 0}; ()

(iv) int my List [] = {4, 3, 7}; ()

(h) Which of the following is a correct way of importing an entire package 'pkg'?

(i) import pkg ()

(ii) Import pkg ()

(iii) import pkg.* ()

(iv) Import pkg.* ()

(i) Which of the following functions is called to display the output of an applet?

(i) Paint applet() ()

(ii) Paint() ()

(iii) Print() ()

(iv) Print applet() ()

(j) Which of the following interfaces enables us to sequentially traverse and access the elements contained in the collection?

(i) Collection interface ()

(ii) Queue interface ()

(iii) Set interface ()

(iv) Iterator interface ()

(5)

2. Indicate *True (T)* or *False (F)* by a Tick (✓) mark :

1×5=5

(a) A class that cannot be subclassed is called final class.

(T / F)

(b) Attempting to use a negative size for an array is an example of runtime error.

(T / F)

(c) Applet can run any program from the local computer.

(T / F)

(d) The statements — `system.out.println()` and `system.out.print ("\n")` both prints one line.

(T / F)

(e) Destroying stage occurs more than once in the life cycle of an applet.

(T / F)

(6)

SECTION—II

(Marks : 10)

3. Answer the following questions : 2×5=10

(a) What is type casting? Give example.

(7)

(b) Define object. Explain how Java objects are created.

(8)

(c) What is the use of applet tag? Give example.

(d) What is the job of finalize() method?

(e) What are the two types of error? Give example each.
