

BCA
Fourth Semester
Programming with JAVA
(BCA- 16)

Duration: 3Hrs.

Full Marks: 70

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

I. Answer any five questions

5×2=10

- 1) What is an Object and how do you allocate memory to it?
- 2) What is method overloading and method overriding?
- 3) What gives java it's "write once and run anywhere" nature?
- 4) What is a constructor? What is a destructor?
- 5) What is static variable and static method?
- 6) What is finalize() method?
- 7) Explain working of Java Virtual Machine (JVM)?

2. Answer any five questions

5×3=15

- 1) What are different types of access modifiers (Access specifiers)?
- 2) Why main() is preceded by public and static in java?
- 3) What is an Interface? What is the difference between abstract class and interface?
- 4) What is source and listener?
- 5) What are the different ways to handle exceptions? Explain
- 6) What is synchronization and why is it important?
- 7) Explain the architecture of an Applet

3. Answer any five questions

5×5=25

- 1) What is inheritance? How do achieve multiple inheritance in java?
- 2) What is multithreading and what are the methods for inter-thread communication and what is the class in which these methods are defined?
- 3) Explain the concept of deadlock. What is the purpose of the wait(), notify(), and notifyAll() methods?
- 4) What is a layout manager and what are different types of layout managers available in java AWT?
- 5) Write a program to explain the Exception Handling mechanisms in Java using the keywords: try, catch and finally.
- 6) Write a java program to display a simple moving banner.
- 7) Write a java program to read the content of a file.

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(The figures in the margin indicate full marks for the questions)

Duration: 20 minutes

Marks – 20

(PART A- Objective)

Time: 20 mins

Total Marks: 20

I. Choose the correct answer:-

20x1=20

1. Which of these keywords is used to make a class?
 - a) class
 - b) struct
 - c) int
 - d) None of the mentioned

2. Which of the following is a valid declaration of an object of class Box?
 - a) Box obj = new Box();
 - b) Box obj = new Box;
 - c) obj = new Box();
 - d) new Box obj;

3. Which of these operators is used to allocate memory for an object?
 - a) malloc
 - b) alloc
 - c) new
 - d) give

4. Which of this statement is incorrect?
 - a) Every class must contain a main() method.
 - b) Applets do not require a main() method at all.
 - c) There can be only one main() method in a program.
 - d) main() method must be made public.

5. What is the process of defining more than one method in a class differentiated by method signature?
 - a) Function overriding
 - b) Function overloading
 - c) Function doubling
 - d) None of the mentioned

6. Which of the following is a method having same name as that of it's class?
- a) finalize
 - b) delete
 - c) class
 - d) constructor
7. Which keyword is used by method to refer to the object that invoked it?
- a) import
 - b) catch
 - c) abstract
 - d) this
8. Which of these keywords is used to refer to member of base class from a subclass?
- a) upper
 - b) super
 - c) this
 - d) None of the mentioned
9. What is the process of defining a method in subclass having same name & type signature as a method in its superclass?
- a) Method overloading
 - b) Method overriding
 - c) Method hiding
 - d) None of the mentioned
10. Which of these method of class String is used to extract a single character from a String object?
- a) CHARAT()
 - b) chatat()
 - c) charAt()
 - d) ChatAt()
11. Which of these keywords is used to define packages in Java?
- a) pkg
 - b) Pkg
 - c) package
 - d) Package
12. Which of these access specifiers can be used for a class so that it's members can be accessed by a different class in the different package?
- a) Public
 - b) Protected
 - c) Private
 - d) No Modifier
13. Which of the following is incorrect statement about packages?
- a) Package defines a namespace in which classes are stored.
 - b) A package can contain other package within it.
 - c) Java uses file system directories to store packages.
 - d) A package can be renamed without renaming the directory in which the classes are stored.

