ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE – 27
BCA(DATA ANALYTICS) – IV SEMESTER
SEMESTER EXAMINATION – APRIL 2022
(EXAM CONDUCTED IN JULY 2022)
BCADA4221: JAVA PROGRAMMING

Time: 2.5 hrs.   **Maximum marks: 70**

This question paper contains FOUR printed pages and three parts

PART A

Answer ALL questions from the following   **1 x 20 = 20**

1. Wrapping up of data and methods into a single unit is known as
   a. Inheritance
   b. Constructor
   c. Polymorphism
   d. Encapsulation

2. The concept of Inheritance provides idea of reusability. This means that we can
   a. We can use only the members of base class
   b. We can use only existing features of base class
   c. We can add features to an existing class without modifying it
   d. None of the above

3. Which is not a separator in java
   a. .
   b. ,
   c. ;
   d. !

4. Which of these access specifiers can be used for a class so that its members can be accessed by a different class in the different package?
   a. public
   b. protected
   c. private
   d. no modifiers

5. Which of the following is the correct way of importing an entire package 'pkg'?
   a. import pkg.
   b. Import pkg.
   c. import pkg.*
   d. Import pkg.*

6. What would be the behaviour if the constructor has a return type?
   a. Compilation error
   b. Runtime error
   c. Compilation and runs successfully
   d. Only String return type is allowed

7. What is not the use of "this" keyword in Java?
   a. Passing itself to another method
   b. Calling another constructor in constructor chaining
   c. Referring to the instance variable when local variable has the same name
   d. Passing itself to method of the same class
8. Which of these packages contains abstract keyword?
   a. java.lang
   b. java.util
   c. java.io
   d. java.system
9. Identify the true statement
   a. "X extends Y" is correct if and only if X is a class and Y is an interface
   b. "X extends Y" is correct if and only if X is an interface and Y is a class
   c. "X extends Y" is correct if and only if either both are class or interface
   d. None of the above
10. What will be the output

```java
class A
{
        public int i;
        public int j;
}
class B extends  A
{
        void display()
        {
                super.j=super.i+j;
                System.out.println(super.i+"  "+super.j);
        }
}
class inheritence1
{
        public static void main(String args[])
        {
        B obj=new B();
        obj.i=1;
        obj.j=2;
        obj.display();
        }
}
```

   a. 2   2
   b. 3   3
   c. 3   2
   d. 1   3
11. A Daemon thread is a ---?
    a. High Priority thread
    b. Low priority thread
    c. Assistant thread
    d. Dangerous thread
12. Thread priority in Java is?
    a. integer
    b. float
    c. double
    d. long
13. What will happen if two thread of the same priority are called to be processed simultaneously?
    a. Both of them will be executed simultaneously
    b. None of them will be executed
    c. It is dependent on the operating system
    d. None of the above

14. What will be the output

```
class multithreaded_programing
{
    public static void main(String args[])
    {
        Thread t = Thread.currentThread();
        System.out.println(t);
    }
}
```

    a. Thread[5,main]
    b. Thread[main,5]
    c. Thread[main,0]
    d. Thread[main,5,main]

15. Which of these method wakes up the first thread that called wait()?
    a. Wait()
    b. Signal()
    c. Notify()
    d. Notifyall

16. Exception generated in try block is caught in
    a. catch
    b. throw
    c. throws
    d. finally

17. Which exception is thrown when divide by zero statement executes?
    a. NumberFormatException
    b. ArithmeticException
    c. NullPointerException
    d. None

18. Which of these functions is called to display the output of an applet?
    a. display()
    b. paint()
    c. displayApplet()
    d. PrintApplet()

19. An applet is a Java class that extends the?
    a. java.Applet class
    b. java class
    c. Applet class
    d. java.applet

20. Which method is automatically called after the browser calls the init method?
    a. Start
    b. Stop
    c. Destroy
    d. paint

PART B

Answer any SIX from the following questions   **5 x 6 = 30**

21. Explain how does JVM works?
22. With suitable program segment explain the different types of looping statements.
23. What do you mean by packages in java? Explain the implementation with suitable example
24. Define constructor. With suitable program segment describe the usage of 'super' keyword.
25. How the compile time error does differs from run time error?

26. What is mean by try..catch exception? Discuss a suitable scenario for this.
27. Write a java program to illustrate the creation of threads.
28. Explain the life cycle of Applet with transition diagram.

PART   C

Answer any TWO from the following questions.   **10 x 2 = 20**

29. Explain the following terms related to Object Oriented Environment
    a) Object and classes   b) Data Abstraction and Encapsulation

    c) Polymorphism   d) Dynamic binding and Message Communication

30. What are the benefits of inheritance? Explain the various forms of Inheritances with Example
31. Write a Java program to
    a) Search a given number using binary search(Command Line argument)
    b) Implement interfaces

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