

B.E./B.TECH. Degree Examination, December 2020

Third Semester

CS18304 – ADVANCED OBJECT ORIENTED PROGRAMMING

(Regulation 2018)

Time: Three hours

Maximum : 80 Marks

Answer **ALL** questions**PART A - (8 X 2 = 16 marks)**

1. Predict the output of the following program:

```
class Test
{
    int i;
}
class Main
{
    public static void main(String args[])
    {
        Test t = new Test();
        System.out.println(t.i);
    }
}
```

- A) Garbage value
B) 0
C) Compilation error
D) Runtime error
2. Predict the output of the following program:

```
class Main
{
    public static void main(String args[])
    {
        int x = 0;
        int y = 10;
        int z = y/x;
    }
}
```

- A) Compilation Error
B) Compiles and runs fine
C) Compiles fine but throws an exception 'ArithmeticException'
D) No Error

3. The method of Thread class which is used to suspend a thread for a period of time is
- A) sleep()
 - B) terminate()
 - C) suspend()
 - D) stop()
4. Identify the output of the following program:
- ```
import static java.lang.System.*;
class StaticImportDemo
{ public static void main(String args[])
 { out.println("GeeksforGeeks");
 }
}
```
- A) GeeksforGeeks
  - B) Runtime error
  - C) Compilation error
  - D) None of the above
5. Predict the output of the following code segment:
- ```
label:for(int i = 1; i < 10; i++)
{
    for(int j = 1; j < 10; j++)
    {
        if(j == 3) continue label;
        System.out.println(j + " ");
    }
}
System.out.println("Loops Ends");
```
6. Identify the error in the following interface declaration and state the reason for your answer.
- ```
interface iface
{ int x;
 void val(int y)
 { x = y; }
}
```
7. Differentiate multithreading and multitasking.
8. Examine the use of each applet life cycle methods.

**PART B - (4 X16 = 64 marks)**

9. (a) Elaborate the types of constructors in Java with suitable example. **(16)**

**(OR)**

(b) Consider the base class 'Vehicle' with number of passengers and colour as members. The classes 'Car' and 'Bus' are inherited from the class 'Vehicle'. Both the classes have members: number of doors, manufacturer and model number. Identify the type of inheritance and write a Java program with necessary methods to implement the given scenario. **(16)**

10. (a) Recommend a suitable construct in Java to implement multiple inheritance and support your answer with an example. **(16)**

**(OR)**

(b) Develop a Java program to create an exception handling construct to handle ArithmeticException and ArrayIndexOutOfBoundsException. **(16)**

11. (a) Identify the suitable file handling constructs in Java to handle the following scenario. Read the contents character by character from the file "test1.txt" and copy the contents to another file "test2.txt". On copying each vowel character should be replaced by '\$'. **(16)**

Input : Content of "test1.txt" : fox is an animal

Output : Content of "test2.txt" : f\$x \$s \$n \$n\$m\$l

**(OR)**

(b) Illustrate the synchronized communication between the producer and consumer threads. **(16)**

12. (a) Create user defined packages and compare the various access protection on packages with suitable example. **(16)**

**(OR)**

(b) Discuss the various methods involved in mouse event handling with suitable example. **(16)**