

**Parvatibai Chowgule College of Arts and Science**  
**Autonomous**

B.Sc. Semester End Examination, January 2022

Semester: III

Subject: Computer Science

Course Title: Object Oriented Programming

Duration: 2 Hours

Max. Marks: 45

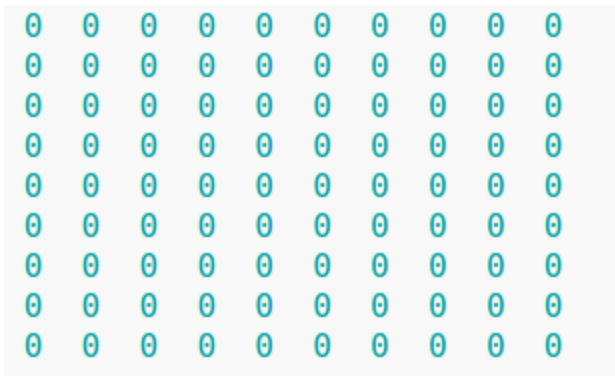
**Instructions:**

1. All Questions are compulsory.

**Q. 1. Answer ANY THREE of the following questions:**

**[9]**

a) Write a Java program to print the following grid using an array.



b) Predict the output of the following Java program and write any two differences between StringBuffer and String class.

```
public static void main(String[] args)
{
    StringBuffer s1=new StringBuffer("Buggy");
    test(s1);
    System.out.println(s1);
}
private static void test(StringBuffer s){
    s.append("Bread");
}
```

- c) Write a Java program to take 10 integer inputs from user and store them in an array and print them on screen.
- d) Explain any three GUI Components in Java?

**Q.2. Answer ANY TWO of the following questions: [12]**

- a) Explain Abstract class and method in Java? What is the difference between Abstraction and Encapsulation?
- b) Define Event. Why do we need event handling in Java? Explain.
- c) Why are access modifiers used in Java? Which access modifier is also known as Universal access modifier? Explain any two access modifiers in detail.

**Q.3. Answer ANY TWO of the following questions: [12]**

- a) With the help of an example explain how while loop is different from do-while loop.
- b) With an example explain Exception and Exception handling in Java.
- c) What is the difference between Static Binding and Dynamic Binding?

**Q.4. Answer ANY ONE of the following questions: [12]**

- A) What is inheritance in Java? Write any two reasons to use inheritance in java? Explain with the help of an example to show how to access any data member or methods of the parent class in Java? What would be the output of the program, if we print n from the main class?

```
class Foo
{
    int n = 50;
}
class Bar extends Foo
{
    int n = 10;
}
public class Baz
{
    public static void main(String[] args)
    {
        Foo p = new Bar();
        System.out.println(p.n);
    }
}
```

**OR**

B) i) Define Constructor? With an example explain Constructor Chaining? If you create 6 objects of a class, then how many time constructors will be called?

ii) Consider the following and write a Java program to append text/string in the file named "ABC.txt", print path of the file and size of the file( before and after appending text).

**File's content:** "This is sample text."

**Text to append:** "Text to be appended."

**File's content after appending:** "This is sample text.Text to be appended."

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