



Progressive Education Society's  
Modern College of Arts, Science & Commerce  
(Autonomous) Ganeshkhind, Pune – 16  
End Semester Examination: Apr/May .2024  
Faculty: Science and Technology

Program:	BCA	Semester: IV	
Program (Specific):	BCA(Science)	SET	B
Class:	SYBCA	Course Type	CC
Name of the Course:	Core Java	Max. Marks	70
Course Code:	23-BCA-241	Time	3 hours
Paper:	-		

**Instructions to Candidates: -**

1. *There are 4 sections in the question paper. Write each section on a separate page.*
2. *All Sections are compulsory.*
3. *Figures to the right indicate full marks.*
4. *Draw a well labelled diagram wherever necessary.*

**SECTION: A**

**Q. 1. Attempt the following.**

**A Multiple choice question**

**[ 5x1=5]**

- I) Which of the following is a valid header for the main() method?
- a) public static void main()                      b) public static void main(String args)
- c) public static void main(String args[])      d) public static int main(String args[])
- II) What does AWT stand for in Java?
- a) Abstract Window Toolkit                      b) Advanced Window Technology
- c) Application Widget Toolkit                      d) Automatic Window Tool
- III) Exception is found in which package in java
- a) java.lang                      b) java.util                      c) java.io                      d) java
- IV) Which is the default layout manager of a panel?
- a) BorderLayout                      b) FlowLayout                      c) BorderLayout                      d) GridLayout
- V) Java supports... inheritance.
- a) single                      b) multilevel                      c) hierarchical                      d) All of the above

**B Answer the following in one or two sentences.**

**[ 5x1=5]**

- I) List the java buzzwords.
- II) A class declared final cannot be instantiated. True/False
- III) What are the types of inheritance?
- IV) Which keywords are used for exception handling?
- V) List the predefined layout managers in java.

**SECTION: B**

**Q. 2. Short answer questions (Attempt any 5)**

**[5x3=15]**

- I) Difference between Java and C++.
- II) Write a note on Default Constructor.

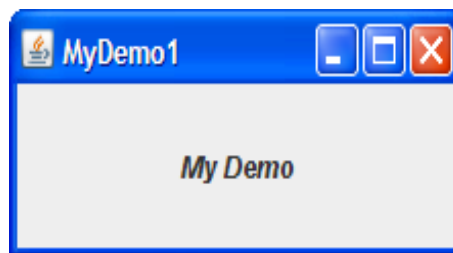
- III) What are the rules for implementing interface.
- IV) Write a Java program to calculate the average of three numbers.(accept numbers using command line arguments)
- V) What are the advantages and disadvantages of AWT?
- VI) What is a stream? Explain the types of stream supported by Java.

### SECTION: C

#### Q.3. Short answer questions (Attempt any 5)

[5x4=20]

- I) Write a note on garbage collector in Java. How can it be invoked?
- II) Explain creating and initializing one dimensional array in Java.
- III) Explain the term ByteArrayOutputStream with an example.
- IV) Explain the use of abstract keyword using example.
- V) Write a note on package. What are the advantages of package.
- VI) What is difference between final and finalize?
- VII) Implement a program with a GUI that looks like the one shown below. Put the main method in a class named *MyDemo1*.



### SECTION: D

#### Q.4. Long answer type questions (Attempt any 5)

[5x5=25]

- I) Explain Single Inheritance with example.
- II) WAP which accept n integers in an array. Handle appropriate exceptions.
- III) Create a class named 'Student' with String variable 'name' and integer variable 'roll\_no'. Assign the value of roll\_no as '2' and that of name as "John" by creating an object of the class Student.
- IV) Write a program to print the following pattern given n as argument:- [for input 3]  
1  
2     2  
3     3     3
- V) Explain the use of multiple catch blocks.
- VI) Write a note on Event, event sources and event listeners.
- VII) Write a program to print the area of a rectangle by creating a class named 'Area' having two methods. First method named as 'setDim' takes length and breadth of rectangle as parameters and the second method named as 'getArea' returns the area of the rectangle. Length and breadth of rectangle are entered through keyboard.