

**CS/MCA/ODD SEM/SEM-5/MCAE-503B/2016-17**



**MAULANA ABUL KALAM AZAD UNIVERSITY OF  
TECHNOLOGY, WEST BENGAL**

**Paper Code : MCAE-503B**

**OBJECT-ORIENTED PROGRAMMING  
WITH JAVA**

*Time Allotted : 3 Hours*

*Full Marks : 70*

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own  
words as far as practicable.*

**GROUP - A**

**( Multiple Choice Type Questions )**

1. Choose the correct alternatives for any *ten* of the following :  $10 \times 1 = 10$

i) What will be the output of the following program when it is executed with the command line argument ?

```
java contest how are you
class contest {
    public static void main(String args[]) {
        System.out.println(args[1]); } }
```

- |            |         |
|------------|---------|
| a) contest | b) how  |
| c) are     | d) you. |

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[ Turn over

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- ii) What will happen when you compile and run the programs following ?

```
public class myclass {  
    public static void main(String args) {  
        System.out.println("hello word"); } }
```

- a) compilation error      b) hello world  
c) Hello world              d) Hello World.

- iii) int k = 5;

```
System.out.println("Hello"+ k + 5 );
```

- a) Hello 10                  b) Hello 55  
c) hello 10                  d) compiler error.

- iv) int p = 3, q = 6 ;

```
System.out.println(p +++ q);
```

- a) 9                          b) 10  
c) 11                         d) compiler error.

- v) int p = 3;

```
For(p = 0 ; p < 10 ; p = p + 2 ) ;
```

```
System.out.println(p);
```

- a) 0 2 4 6 8                  b) 2 4 6 8  
c) 10                         d) 4 6 8 10.

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vi) `int x = 2;`

`for (; x < 5 ; )`

`System.out.println(j++);`

- a) 2 3 4
- b) compiler error
- c) runtime error
- d) infinite loop.

vii) `int a[] = { 1, 2, 3, 4, 5 };`

`System.out.println(a.length);`

- a) 5
- b) compiler error
- c) need to import some package
- d) runtime error.

viii) `String s1 = "java"`

`System.out.println(s1.indexOf('v'));`

- a) 1
- b) 2
- c) 3
- d) none of these.

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ix) String s="Hello"

```
System.out.println(s.charAt(0));
```

- a) H
- b) h
- c) error
- d) none of these.

x) In Java Applet, start() method may be invoked

- a) once
- b) twice
- c) many times
- d) none of these.

xi) JVM stands for

- a) Java Virtual Machine
- b) Java Visual Machine
- c) Java Vision Machine
- d) none of these.



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5. Compare and contrast "String" and "StringBuffer". How does "Scanner" work ? 2 + 3
6. Explain the private & protected modifiers in brief. What is dynamic method dispatch ? 2 + 3
7. Differentiate between final, finally and finalize in java.

**GROUP - C**

**( Long Answer Type Questions )**

Answer any *three* of the following.  $3 \times 15 = 45$

8. a) Write a program in java to reverse a string. 7  
b) Write a program in java to input a number from the command line and find whether it is a prime or not. 8
9. a) Why is inheritance important for an OOP ? 2  
b) Define different types of inheritance with example. 4  
c) Explain the usage of 'this' and 'super' keyword in java program. 3 + 3  
d) Explain the role of template. 3

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10. a) Describe applet life cycle. 3
- b) Write a program to show all the steps of applet life cycle. 5
- c) What are the different attributes on applet tag ? 5
- d) What is local applet ? 2
11. Write short notes on any *three* of the following : 3 × 5
- a) JVM
- b) Garbage collection
- c) Package
- d) Runtime polymorphism
- e) Thread priority.
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