

4E2090

**B. Tech. (Sem. IV) (Main Back) Examination, June/July - 2013**  
**Electronic Inst. & Control Engg.**  
**4IC6.1 Elective Object Oriented Programming**

(Common for Electronics & Comm. Engg., AE & I Engg. and EI & C Engg. Branch)

Time : 3 Hours]

[Total Marks : 80

[Min. Passing Marks : 24

*Attempt any five questions, selecting one question from each unit.*

*All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.*

*Units of quantities used/calculated must be stated clearly.*

Use of following supporting material is permitted during examination.  
 (Mentioned in form No. 205)

1. NIL2. NIL

## UNIT - I

- 1 (a) What is Class ? Explain the concept of member function and member variable in detail. 8
- (b) What is data encapsulation ? 8

OR

- 1 (a) What is Inheritance ? Explain the types of Inheritance in detail. 8
- (b) Discuss the concept of polymorphism with a suitable example. 8

## UNIT - II

- 2 (a) What are the inline functions ? What are the limitations of inline functions ? Explain. 8
- (b) What are the difference between constructors and destructors ? 8

OR



- 2 (a) How does a object of drive class access the member of base class ? 8
- (b) What is function Overloading ? Explain with a suitable example. 8

### UNIT - III

- 3 (a) Explain the key features of Java. 8
- (b) Explain "Java as a virtual machine". 8

### OR

- 3 (a) Write a Java program to multiply two matrix of an order of  $2 \times 2$ . 8
- (b) What are the Applets ? Discuss its application. 8

### UNIT - IV

- 4 (a) Explain the following with suitable example : 8
- (i) Bitwise operator
- (ii) Boolean logic operator.
- (b) Write a Java program to calculate simple intrest. 8

### OR

- 4 (a) What is operator precedence ? Explain in brief. 8
- (b) Write a Java program to print the following pattern
- ```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```



UNIT - V

5 (a) What are the difference between error and exceptions ? How the exceptions are handled in Java ?

8

(b) What are packages ? Explain any 5 inbuilt packages in brief.

8

OR

5 Write short notes on : (any two)

(a) Packages access protection

(b) Interface as macros

(c) Abstract class V/s interface.

2×8=16

