

Roll No. : \_\_\_\_\_

**4E2090****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****4E2090]**

1

**[Contd...**

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2 (a) How does a object of drive class access the member of base class ?

(b) What is function Overloading ? Explain with a suitable example.

### UNIT - III

3 (a) Explain the key features of Java.

(b) Explain "Java as a virtual machine".

OR

3 (a) Write a Java program to multiply two matrix of an order of  $2 \times 2$ .

(b) What are the Applets ? Discuss its application.

### UNIT - IV

4 (a) Explain the following with suitable example :

(i) Bitwise operator

(ii) Boolean logic operator.

(b) Write a Java program to calculate simple intrest.

OR

4 (a) What is operator precedence ? Explain in brief.

(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

