

3E1415

Roll No. : _____

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B. Tech. (Sem.III) (Main/Back) Examination, January - 2009

(3ME5) Object Oriented Prog. in C++ (Mechanical Engg.)

(3PI5) Object Oriented Prog. in C++ (Prod. & Indus. Engg.)

(3AE5) Object Oriented Prog. in C++ (Automobile Engg.)

Time : **3 Hours**

[Total Marks : **80**

[Min. Passing Marks : **24**

Attempt five questions in all. Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly.

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

1. _____ Nil 2. _____ Nil

- 1 What do you mean by object oriented programming ? How it is different from structured programming language ? Explain with examples.

16

OR

- 1 (a) What are the three main principles of object oriented programming ? Explain with suitable examples.

8

- (b) Explain different basic concepts of object oriented programming with example.

(i) Message passing

(ii) Encapsulation

(iii) Abstraction

(iv) Polymorphism

8

- 2 (a) What is an operator ? List out the various types of operators used in C++ ?

8

- (b) What is function overloading ? Write a program to find Area of rectangle and area of circle using function overloading ?

8

OR

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1

[Contd...

- 2 (a) Explain call by reference and call by address by suitable example. 8
- (b) Write a program to find sum of values of an array. 8
- 3 (a) Explain friend function and friend class using suitable example. 8
- (b) What is constructor and destructor ? Why we use constructor and destructor in program. Explain with example. 8

OR

- 3 What is Inheritance ? Why we use Inheritance ? Explain different types of Inheritance with suitable examples. 16
- 4 What is template function ? What is the use of template function ? Write a program to exchange (swap) 2 integer, 2 float and 2 character values using template function. 16

OR

- 4 (a) Explain the syntactic rules for the following functions 8
- (i) j stream
- (ii) Dj stream
- (iii) ij stream
- (b) What is binary file ? List the merits and demerits of binary files wage in C++. 8
- 5 What is Link list ? How it is different from array ? Explain different types of link list with example. 16

OR

- 5 Write short notes on : 16
- (i) Stack
- (ii) Queue
- (iii) Priority queue
- (iv) Circular list

