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3E1415

Roll No. : _____

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B. Tech. (Sem. III) (Main/Back) Examination, February - 2010
(Common for Mech., P. & I. & Automobile Engg.)
(3AE5 Object Orientated Programming in C++)

Time : 3 Hours]

[Total Marks : 80
[Min. Passing Marks : 24

Attempt overall 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 (a) What is the difference between top down programming approach and bottom up programming approach? Explain with suitable examples.

4+4=8

(b) What do you mean by Object Oriented Programming and Structured Programming? Explain the comparison of both with example of programming languages.

2+6=8

OR

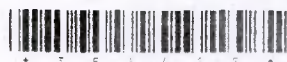
1 Define Object Oriented Programming Language. What are the features of object oriented programming language with example of programming commands ?

2+8+6=16

2 (a) What is difference between call by reference and call by address? Use suitable example to explain them.

4+4=8

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[Contd...

(b) Explain operators used in C++. Take suitable example for specifically

- (i) Scope resolution operator
- (ii) Delete operator

2+3+3=8

OR

2 What is inline function and function overloading? Write a program to explain array of pointers.

4+4+8=16

3 (a) What is virtual function? Use the suitable example the conditions and criteria when we need to make a function 'Virtual'.

2+3+3=8

(b) What is operator overloading and how it is different from function overloading? Explain with suitable commands.

3+3+2=8

OR

3 (a) Explain the following terms :

- (i) Friend function
- (ii) Private member function
- (iii) Inheritance
- (iv) Polymorphism

2+2+2+2=8

(b) (i) Write note on constructors and destructors.

2+2=4

(ii) Write note on abstract base class and member-functions.

2+2=4

4 What do you understand by file organisation? Explain different methods of organising the files. What are the basic file operations that can be applied to files.

2+6+8=16

OR



4 (a) What is a template class and template function? Use suitable example to explain them.

4+4=8

(b) Define stream class. What are the various types of stream classes.

2+6=8

5 Write a program to perform following operations on the queue using arrays.

(i) Insertion in a queue

(ii) Deletion front the queue

(iii) Display the queue

5+5+5+1=16

OR

5 (a) Define linked list. Explain how many operations can be performed on linked list and types of linked list.

2+3+3

(b) Write an algorithm to insert a node at the beginning of circular linked list.

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