

**3E1635**

Roll No.

Total No. of Pages : **3****3E1635****B. Tech. (Sem. III) (Main/Back) Examination, December - 2017**  
**Aeronautical Engg.****3AN5 Object Oriented Programming in C++**  
**(AE, ME, AN)****Time : 3 Hours****Maximum 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. \_\_\_\_\_ Nil                      2. \_\_\_\_\_ Nil

**UNIT - I**

- 1 What is class ? Explain various other features of object orient programming in C++ in detail.

16

OR

- 1 (a) Write a program in C++ to store the book information in a Central Library. Also write function to update the book information.

9

- (b) Write short note on Message Passing with an example.

7

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**UNIT - II**

- 2 (a) What is a pointer ? How it is available to member function of a class ? Explain. 10
- (b) What are the uses of reference in functions ? 6

**OR**

- 2 (a) Explain the purpose of a function parameter. Also explain the difference between parameter and an argument. 9
- (b) Explain '+' operator overloading with an example. 7

**UNIT - III**

- 3 (a) Write brief note on friend function and show how modifying a class's private data with a friend function. 10
- (b) Compare constructor conversion and operator conversion. 6

**OR**

- 3 Explain various forms of inheritance with appropriate examples. 16

**UNIT - IV**

- 4 Explain standard template library and standard library container class in detail.

16

**OR**

- 4 (a) Write a program which clearly describes function and class templates.

8

- (b) Write short note on files and streams classes.

8

**UNIT - V**

- 5 (a) Write a function to insert and delete the element in a sorted single linked list.

8

- (b) What is circular queue ? Explain the need of taking an array of size one more than the size of queue.

8

**OR**

- 5 (a) Explain doubly linked list with an appropriate example.

8

- (b) Write short note on priority queues with example.

8