

Roll No .....

## MCADD-501

### M.C.A. (Integrated), V Semester

Examination, November 2019

### Object Oriented Programming in C++

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) What is the Syntax of switch statement? Write a program in C++ to greet people with 'Good Morning', 'Good Afternoon' and 'Good evening' according to the 24 hour time entered by user using switch statement.  
b) Write features of Object Oriented Programming Languages.
2. a) Define class and object. Explain with example.  
b) What is an Object array? How is it declared? How can we pass Object array through function? Explain.
3. a) Define constructor. Give its types with example of each.  
b) What is function overloading? Explain with the help of a program.
4. a) Write a program in C++ to overload + operator with respect to class distance with data members m, cm and mm.  
b) What is Inheritance? Describe its types.

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5. a) What is Polymorphism? Explain the concept of virtual functions.  
b) Define friend function. What are its advantages? Give example of friend function.
  
6. a) Explain the concept of early and late binding. Also discuss the concept of abstract classes.  
b) Write brief notes on the following:
  - i) Pure virtual function
  - ii) Class access modifiers
  - iii) This pointer
  
7. a) Describe briefly the features of I/O stream supported by C++.  
b) What are user defined Manipulators? Write a program to create inserter.
  
8. a) Explain UML concepts.  
b) Write brief note on UML diagrams and object diagrams.

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