C++ and Object Oriented Paradigm

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Technology BCA

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University Exam

Mangalore University

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C++ AND OBJECT ORIENTED PARADIGM

Time : 3 Hours Max Marks: 80

PART A

Note: Answer any TEN questions.

1 a) What are the different ways of writing comment lines in C++ ?

b) What do you mean by type conversion in C++ ? Explain.

c) Define the following

i) Data hiding

ii) Encapsulation

d) What are the two major components of an object?

e) Assuming var 1 starts with the value 100, what will the following code fragment print out?

cout <<varl1--;

cout <<++varl;

f) State true or false:

i) Data items in a class must be private.

ii) The >=operator can be overloaded.

g) Explain any two string functions in C++.

h) What do you mean by operator overloading? How many arguments are required in the definition of an overloaded binary operator?

i) What are constructors? Give an example.

j) Distinguish between the base class and the derived class.

k) What is an abstract base class?

i) How are the members of a class accessed in C ++ ? (2x10=20)

PART B

Note: Answer any ONE question from each unit

UNIT - I

2. a) Mention the data types present in C++. Explain with example.

b) What are the elements of object oriented programming? Explain.

c) Write a C++ program to check whether the entered number is odd or even using ternary operator?

d) Evaluate the following : Assume a =5, b=5 and c=1

i) k= ++a - b--/ 5+c

ii) c+ = a>b || 10 + b>c (5+5+3+2)

Contd... 2

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3. a) Explain the usage of switch statement. How is it different from the if .....else structure.
   b) What is a header file? How does it differ from a library file?
   c) Explain
      i) Insertion and extraction operators.
      ii) I/ O manipulators.
      iii) Stream (5+4+6)

UNIT - 2

4. a) Write a note on enumerated data type.
   b) What are inline functions? How are they useful?
   c) Compare while and for loop with suitable examples.
   d) Write a C++ program to generate 'N' prime numbers. (3+3+5+4)

5. a) Distinguish the following
      i. break and continue
      ii. class and structure
   b) Explain the various storage classes used in C++.
   c) Write a function that takes 2 distance values as arguments and returns the larger to the main(). The main () should accept two distances from the user, where distance is a class with feet and inches. (4+6+5)

UNIT - 3

6. a) Explain the concept of 'Arraya of objects' in C++.
   b) What are the characteristics of constructors?
   c) What is an array? Write a program to arrange 'n' elements in ascending order. (5+5+5)

7. a) Explain static data members and static member functions with an example each.
   b) With a code example, explain how to overload the constructors?
   c) With a proper example explain how we can pass and return an object to/from a function. (5+5+5)

UNIT - 4

8. a) What are the pitfalls of operator overloading? Explain how the user can avoid these pitfalls during programing.
   b) Write a C++ program, to concatenate two strings using operator overloading.
   c) What are the different forms of inheritances? Explain with example for each. (5+5+5)

9. a) Explain the following access specifiers
      i. private ii. public iii. protected
   b) Explain with code example how the pre incrementer and post incrementer are taken care of while declaring operator overloading.
   c) Explain with code example the concept of conversion between basic type to object type. (6+4+5)

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