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Total Number of Pages: 02

B.Tech.
PAU5H003

5th Semester Regular Examination 2017-18
C++ & Object Oriented Programming

BRANCH: AUTO

Time: 3 Hours

Max Marks: 100

Q.CODE: B175

Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

- Q1** **Answer the following questions: *multiple type or dash fill up type*** **(2 x 10)**
- a)** Which of the following type of class allows only one object of it to be created?
 - a.Virtual class
 - b.Abstract class
 - c.singleton class
 - d.friend class
 - b)** Which of the following is not the member of class?
 - a.Static function
 - b.Friend function
 - c.Virtual function
 - d.const function
 - c)** A constructor that accepts _____ parameters is called the default constructor.
 - a. One
 - b. two
 - c. Three
 - d. No
 - d)** Which of the following cannot be declared as virtual?
 - a.Constructor
 - b.Destructor
 - c.Data Members
 - d.Both A & C.
 - e)** Which of the following operators cannot be overloaded?
 - a.The.operator
 - b.The-> operator
 - c. The [] operator
 - d.The & operator
 - f)** Which allows you to create a derived class that inherits properties from more than one base class?
 - a.Multilevel inheritance
 - b.Multiple inheritance
 - c.Hybrid Inheritance
 - d.Hierarchical Inheritance
 - g)** Can two classes contain member functions with the same name?
 - a.No
 - b.Yes, but only if the two classes have the same name.
 - c.Yes, but only if the main program does not declare both kinds
 - d.Yes this is always allowed.
 - h)** _____ is a function declared in a base class that has no definition relative to the base class.
 - a. Pure virtual function
 - b. Virtual function
 - c. Friend function
 - d. None of the above.

- i) The function is linked with a particular class much later after the compilation, this process is termed as
 - a. Static binding
 - b. Late binding
 - c. Static linking
 - d. None of above
- j) A pure virtual function is a function that:
 - a. Has no body
 - b. Returns nothing
 - c. Is used in a base class
 - d. Takes no argument

Q2 Answer the following questions: *Short answer type* (2 x 10)

- a) What is Procedure oriented language? Give some characteristics of procedure-oriented language.
- b) Differentiate between class and object.
- c) What do you mean by data abstraction?
- d) Define dynamic binding/late binding.
- e) What are constant arguments?
- f) What is static data member?
- g) Define parameterized constructor.
- h) Mention some properties of friend function.
- i) With suitable example explain function overloading.
- j) What do you mean by recursion?

- Q3 a) Discuss about the advantages of oops over C. (10)**
b) Write a c++ program that will ask for temperature in celcius and displays in fahrenheit. (5)

- Q4 a) Explain in detail about Class, Objects, Methods and Messages. (10)**
b) Explain the constructors and destructors in details with suitable examples. (5)

- Q5 a) Explain unary and binary operator overloading with rules and examples. (10)**
b) With an example describe abstract class. (5)

- Q6 a) What do you mean by polymorphism? Describe various types of polymorphism. (10)**
b) What is the difference between normal member function and a virtual member function? (5)

- Q7 a) What is inheritance? List the various inheritances with suitable diagrams and examples. (10)**
b) Write a c++ program to generate Fibonacci series using copy constructor. (5)

- Q8 a) How exception is being handled in C++, explain with exception handling model. (10)**
b) What is stream? Explain the features of C++ stream I/O with C's I/O system (5)

- Q9 a) Explain C++ standard template library briefly. (10)**
b) What do you mean by inline function? Give an example. (5)