POKHARA UNIVERSITY

Level: Bachelor Semester: Fall Year : 2018
Programme: BE Full Marks: 100
Course: Object Oriented Programming in C++ Pass Marks: 45
Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) With the help of object oriented programming explain how can object oriented programming cope in solving the complex program. Explain computation as simulation. 7
   b) Private data and function of a class cannot be accessed from outside function. Explain how it is possible to access then with reference of an example. 8
2. a) What is constructor? Can constructor be overloaded? If yes how? 7
   b) Create a class called Employee with data member Code, Name, Address, Salary. Create a constructor to initialize the member of the class. Also create another constructor so that we can create an object from another object. Define member function display() to display the information of the class. 8
3. a) Explain how does composition provide re-usability? Differentiate between Is-A rule and Has-A rule. 7
   b) What is a hybrid inheritance? Does ambiguity occur in hybrid inheritance? If Yes? How can you remove this? Explain with example. 8
4. a) What are the advantages and disadvantages of using friend function? Explain with example program. 7
   b) What is type casting? Write a program to read a height of a person in Feet and Inches and convert it into Meter using user defined to class type conversion method. 1 meter=3.28084 feet, 1 feet=12 inch. 8
5. a) What is function template? Create a template function to swap two values. 7
   b) Create a class Person with data members Name, Age and Address. Create another class Teacher with data members Qualification and Department. Also create another class Student with data member Program and Semester. Both class are inherited from the class Person. 8

Every class has at least one constructor which uses base class constructor. Create member function Show Data() in each to display the information of the class member.

6. a) What is compile time and run time polymorphism? How can you achieve runtime polymorphism in C++? Explain deferred method. 7
   b) What are the use of new and delete operator in a program ? Explain with an suitable example. 8
7. Write short notes on: **(Any two)** 2×5
   a) Overriding
   b) Exception Handling
   c) Standard Template Library