CLASS –XII   SUBJECT – COMPUTER SCIENCE
ASSIGNMENT- 3   TOPIC – Constructors and Destructors

1. Differentiate between
   a. constructor and destructor.
   b. constructor and member function.
   c. Implicit and explicit constructor call

2. What is the need for user-defined constructors and destructors, if default constructors and destructors are available?

3. List the characteristics of constructor and destructor.

4. When is a destructor called? Explain the concept w.r.t. local and global objects.

5. Constructors and Destructors should always be defined as public. Justify.

6. What is a copy constructor? How is it different from the assignment operator? Explain with the help of an example. When is it called?

7. Refer to Q4, Q8 and Q9 of Assignment-2. Write constructor functions to initialize the data members. Also write copy constructors for all.

8. What is parameterized constructor? How is it useful?

9. Create a program to find the volume of a box. The main() should have the following options:
   a. **Default Volume of Box** (Use 0-argument constructor and l=b=h=1)
   b. **User-defined Volume of Box with single value** (Use 1-argument constructor and l=b=h=n)
   c. **User-defined Volume of Box with all values** (Use 3-argument constructor for l, b and h)
   d. **Exit** (Use destructor to print "Bye Bye")
   The Box class should have appropriate getter and setter functions.

10. As soon as a user defines an n-argument constructor, the system no longer provides the default constructor. Comment.