

CLASS..... 11

SUBJECT..... Computer Science

CHAPTER..... General OOP Concepts

Answers

1. The two major types of programming languages are

- a) Low level languages, eg. Machine language, Assembly language.
- b) High level languages, eg. BASIC, C, C++, Java etc.

2. Object oriented programming is an approach in which stress is laid on data rather than functions. The data values remain associated with the functions of a particular block of the program so as to encourage data security.

Two OOP languages are Java and Python.

3. The difference between Class and Object are as follows:-

Class is a blueprint or prototype of an object whereas object is a unique entity having some characteristics and behaviour.

Class is known as 'Object Factory' whereas object is known as 'Instance of a Class'.

4. The programming approach that focuses on the procedures for the solution of a problem is known as procedural programming paradigm. Languages support this paradigm by providing facilities for passing arguments to functions (subprograms) and returning values from functions (subprograms).

This approach emphasizes on the 'doing' rather than the 'data'.

5. A base class is a class whose properties are inherited by derived class. A derived class is a class that inherits properties from some other class. A derived class has nearly all the properties of base class but the reverse of it is not true.

6. The transitive nature of inheritance states that if a class A inherits properties from its base class B, then all its subclasses will also be inheriting the properties of base class of A, i.e., B.

7. Abstraction is the act of representing essential features without including the background details.

Encapsulation is the way of combining both data and the functions that operate on the data under a single unit.

Thus, encapsulation is the way of implementing abstraction.

8. Polymorphism is an object oriented principle. It is the ability for a message or data to be processed in more than one form. It is a property by which the several different objects respond in a different way (depending upon its class) to the same message.