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Assignment 1

Q1. What are the different types of programming languages?

1. Therefore there are three types of programming languages :-

(i) Assembly Language
(ii) Machine Language or Low Level Language
(iii) High Level Language

Q2. What is the difference between OOPs and POP?

2.

OOPs	POP
• In OOP program is divided into parts called objects.	In POP, program is divided into small parts called functions.
• OOPs provide Data Hiding so provides more security.	POP does not have any proper way for hiding data so it is less secure.
• OOP's main focus is on data security.	The main focus of POP is on "how to get the task done."
• It follows bottom-up approach.	It follows top-down approach.
Examples are : C++, Java etc.	Examples are : C, VB, Pascal etc.

Q3. What are four OOP's concepts?

3. The four OOP's concepts are :-

- Abstraction
- Inheritance
- Polymorphism

- Encapsulation

Q4. Define Encapsulation?

4. The wrapping up of data and its associated function (data member) into a single unit (called class) is known as Encapsulation.
The meaning of "Encapsulation", is to make sure that "sensitive" data is hidden from users.

Q5. Differentiate between Inheritance and Abstraction?

5. The act of representing essential features of an object without knowing the background and details is known as Abstraction
Whereas
Inheritence is the ability of an object to acquire the properties of another class.

Q6. What is an Object and Class in Java?

6. An object is the name of any person, place, things or entity. Every object has the following inbuilt characteristics: Identity, state and Behaviour, Whereas a class is user defined blueprint or prototype from which objects are related.

Classes and Objects are basic concepts of Object Oriented Programming which revolve around the real life entities.

Q7. Why Object is called an instance of the class?

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7. A class is a structure of an object, meaning all the necessary elements of the class are present in the object, that's why it is also known as instance of class.

Q8. What are Variables and Keywords?

8.

Q9. What are comments?

9. Comments are text notes added to the program to provide explanatory information about the source code.
These are of two types:-

- Single line comments:- The comments in single line are called single line comments.
- Multi line comments:- The comments in multi lines are called multi line comments.

Q10. What is Java and what are its features?

10. Java is a high level programming language originally developed by Sun Microsystems and released in 1995.
Features of Java are:-

- Object oriented
- Platform Independent
- Simple

- Secure
- Robust
- Multithreaded
- Interpreted
- High Performance
- Distributed
- Dynamic

Q1. Define Bytecode and JVM.

A1. Java bytecode is the instruction set for the Java Virtual Machine. As soon as a java program is compiled, java bytecode is generated.
JVM (Java Virtual Machine) is an abstract machine. It is a specification that provides runtime environment in which Java bytecode can be executed.

Q2. What are exceptions? Explain its types?

A2. The unexpected situation which occurs during the execution of the program is called exception or error.
There are three types of exceptions :-

(i) Compile time error - The error which occurs during the compilation of the program, is called the compile time error.

(ii) Semantic error - The error which occurs when we issue some meaningless statements is called semantic error. It is of two types :-
- Logical error
- Run-Time error

Q13. What is a base class and derived class?

13.

Q14. Why class is known as object factory?

14. A class is also known as object factory because the class is basically an object maker.

Q15. Write a program to print your name, age and your city in different lines?

```
Class Example
{
    Public static void main(String [] args)
    {
        System.out.println("My name is Dev");
        System.out.println("My age is 16");
        System.out.println("My city is Jhansi");
    }
}
```