**FULL STACK DEVELOPMENT – WORKSHEET-4- ANS**

* Answers of Worksheet 4

Q1. **Ans: OOP’s** is an Object Oriented Programing System. In this we represent everything as an object and the class. In this we use class, object and features like Inheritance, Polymorphism, Abstraction and Encapsulation.

Q.2 **Ans**:

**Object**: Gives things’s state and behavior .

**public** **class** MyPencil {

**int** x=10;//price

String y="yellow";// color

**public** **static** **void** main (String args []) {

MyPencil Myobj= **new** MyPencil ();

System.***out***.println(Myobj.x);

System.***out***.println(Myobj.y);

}

}

**Output: 10**

**yellow**

**Class:** A class keyword is used to create a class. A simplified general form of the class definition is given below:

|  |  |
| --- | --- |
|  | class classname {  type instance variable 1;  type instance variable 2;  .  .  .  type instance variable n;  type methodname 1 (parameter list) {  // body od method  }  type methodname 2 (parameter list) {  // body od method  }  type methodnamen (parameter list) {  // body od method  }   } |

**Abstract class Example:** Abstraction is a process which displays only the information needed and hides the unnecessary information. We can say that the main purpose of abstraction is data hiding.

//abstract parent class

**abstract** **class** animal {

//abstract method

**public** **abstract** **void** sound();

}

**public** **class** animel **extends** animal {

**public** **void** sound ( ) {

System.***out***.println("moo moo");

}

**public** **static** **void** main ( String args [ ] ) {

animal obj = **new** animel ( );

obj. sound ();

}

}

**Output: moo moo**

\*Multiple Choice Questions-Ans\*

Q1. **Ans: A) Making at least one member function as pure virtual function**

Q2. **Ans: A) 1,3 and 4**

Q3. **Ans: B) at compile time**

Q4 **Ans: A) 0**

**Q5.Ans: C) both A and B**

**Q6.Ans: C) class**

Q7. **Ans: D) All of the above**

Q8. **Ans: C) Compile error.**

Q9. **Ans: A) Only 1,2 and 3.**

Q10. **Output:** Derived::show() called

Explaination: In the above program, b is a reference of Base type and refers to an object of Derived class.

Q11 **Output:** compile error.

Explaination: Final methods cannot be overridden.

Q12. . **Output:** Derived::show() called

Explaination: In the above program, b is a reference of Base type and refers to an object of Derived class.

Q13. **Output:** Exception in thread "main" java.lang.NoSuchMethodError: 'void com.java.question\_set4.Derived.getDetails()'

at com.java.question\_set4/com.java.question\_set4.Test.main(Test.java:20)

Explaination: Final and static methods cannot be overridden.

Q14.**Output:**Compilation error.

Exception in thread "main" java.lang.Error: Unresolved compilation problem:

The return type is incompatible with Derived.getDetails(String)

at

com.java.question\_set4/com.java.question\_set4.Test.getDetails(Test.java:13)

at com.java.question\_set4/com.java.question\_set4.Test.main(Test.java:21)

Q15**. Output: Adding to 100, x = 104**

**Adding to 0, y = 3 3 3**

**Explaination: both x and y are static variables here.**

Q16. **Output:** Exception in thread "main" java.lang.Error: Unresolved compilation problem:

The method m1(int, float) is ambiguous for the type San

Explaination: The method requires body instead of semicolon.

Q17. Error.

**Explaination: Type mismatch can not convert from null to int.**

Q18. **Output: 0 0**

Explaination: The protected member in a program of Java is accessible in all the classes of the same packages and inherited classes of other package. Integral variable value initialized as 0 in Java by the default constructor. So, that's why the output of the given code is 0  0.

Q19. **Output:** Constructor called 10

Constructor called 5

Q20. **Output: 7**

Q21. **Output: 2**

Explaination: displays value of obj2 which contains j value.

Q22. **Output:** Error: Could not find or load main class method\_overiding

Explaination: class contains a private member variable j, this cannot be inherited by subclass B and does not have access to it.

Q23.**Output: 2**

Explaination: class A & class B both contain display() method, class B inherits class A, when display() method is called by object of class B, display() method of class B is executed rather than that of Class A.

Q24. **Output:** Error: Unresolved compilation problem:

Syntax error, insert ";" to complete Statement at com.java.question\_set4/com.java.question\_set4.super\_use.main(super\_use.java:24)

Q25. **Output:** obj1.a = 4 obj1.b = 3

obj2.a = 4 obj2.b = 3