Full Stack Development Worksheet-4

Q1.Ans: Object means a real-world entity such as a computer, chair etc.
Object-Oriented Programming is a methodology to design a program using classes and objects.
It simplifies software development and maintenance by providing some concepts: object, classes, abstraction, inheritance, polymorphism, etc.Example: if we consider fruits as a class, then Apple, Mango, and Banana can be considered as objects.

Q.2.1. Ans: (A)
Making atleast one member function as pure virtual function is the method to make abstract class.

Q2.Ans:A

Q3.Ans:B
Overloading is determined at compile time. Hence, it is also known as compile time polymorphism.

Q4.Ans:A
A default constructor is a constructor that either has no parameters, or if it has parameters, all the parameters have default values**.**

Q5.Ans:C.

Q6.Ans:C.
Objects are the variables of the type Class. Once the class has been defined, we can create any number of objects belonging to that class.

Q7.Ans: A. Private data
A member function can access private data of the class but a non-member function cannot do that

Q8.Ans: B. 0

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

Q10.Ans: Derived::show() called
In program, b is a reference of Base type and refers to an object of Derived class.In Java, functions are virtual by default. So the run time polymorphism happens and derived fun() is called.

Q11.Ans: Compiler Error

Final methods can not be overridden.

Q12.Ans: Base::show() called.

when a function is static, runtime polymorphism doesn't happen.

Q13.Ans: Test class Derived class.

Q14.Ans:

Compilation Error .

The overriding method must have the same signature, which includes the argument list and the return type.

Q15.Ans:

Adding to 100,

 x = 104 Adding to 0,

 y = 3 3 3

Q16.Ans: Compile Time Error.

While resolving the overloaded method, the compiler automatically promotes if an exact match is not found. But in this case, which one to promote is an ambiguity.

Q.17.Ans: Compilation error Because of temp.

 temp is a primitive data type. Primitive data types cannot be assigned null values. data is an instance of class Integer and therefore can hold null values**.**

Q18.Ans: 0 0

Q19.Ans:

Constructor called 10

Constructor called 5

Q20.Ans: 7.

Both x,and y are pointing to the same array.

Q21.Ans: 2. r is a reference of type A, the program assigns a reference of object obj2 to r and uses that reference to call function display() of class B.

Q22.Ans: 2. 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.

Q23.Ans: 1 2 .

Both class A & B have members with the same name that is j, members of class B will be called by default if no specifier is used. I contains 1 & j contains 2, printing 1 2.

Q24.Ans: 1 2.

Keyword super is used to call the constructor of class A by the constructor of class B. Constructor of a initializes i & j to 1 & 2 respectively.

Q25.Ans:

obj1.a = 4 obj1.b = 3 obj2.a = 4 obj2.b = 3

obj1 and obj2 refer to the same memory address.