Worksheet 4

Q1.

OOPS-Object oriented Programming language

OOPs refers to languages that use objects in programming, which uses the concept to design a program using classes and objects. It simplifies software development and maintenance by providing some concepts:

1.object
2.class
3.Inheritance
4.polymorphism
5.Abstarction
6.encapsulation

An Object can be defined as an instance of a class. An object contains an address and takes up some space in memory. Objects can communicate without knowing the details of each other's data or code.

Collection of objects is called class. It is a logical entity.

A class can also be defined as a blueprint from which you can create an individual object.

Q1.A
Q2.C
Q3.B
Q4.A
Q5.A
Q6.C
Q7.A
Q8.B
Q9.A
Q10.o/p- `Derived::show() called`

This is an example of polymorphism where we have created the object of derived class so the derived class's show method will be called.

Q11. Compile time error.. since show method is defined as final in base class .. so u cant override the method.

Q12.o/p- Base::show() called

Since the show method is static.. it doesn't need an object to call.. so it will directly call the base method of the class

Q13.o/p- Test class

Derived class

Since super keyword is used to call the method from base class

Q14. C

The overriding method must have same return type

Q15. Adding to 100, x = 104
Adding to 0, y = 3 3 3

Q16. Compile time error .. method parameters are mismatched for the data type
Q17. Compile time error..null value cant be converted into int.
Q18.o/p- 0 0 ….since protected variables are accessible in same package.
Q19. Constructor called 10
Constructor called 5
Q20. o/p—7 two dimensional array
Q21.o/p – 2 derived class object will call the derived class methd
Q22.o/p –2
Q23.o/p 1 2
Q24. o/p 1 2 class b constructor will call the call A bcoz of Super() function
Q25.o/p
obj1.a = 4 obj1.b = 3
obj2.a = 4 obj1.b = 3