

OOP Fundamentals (10 minutes)

1. It is used to model the structure of objects in the system *

1 punto

- ☒ Class Diagrams
- ☐ Use Case Diagrams
- ☐ Flowcharts

2. Hiding of design decisions inside software appropriate components *

1 punto

- ☒ Encapsulation
- ☐ Abstraction
- ☐ Inheritance

3. An object includes another object as subpart of it *

1 punto

- ☒ Aggregation
- ☐ Dependency
- ☐ sub-object

4. Leave unnecessary definitions out of the system implementation *

1 punto

- ☐ Abstraction
- ☒ Encapsulation
- ☐ Objects

5. A class is composed of *

1 punto

- ☐ Attributes and variables
- ☒ attributes and methods
- ☐ functions and methods

6. The parent of all the classes in Java is known as *

1 punto

- ☒ Object
- ☐ Class
- ☐ object
- ☐ class

7. The creator of the Java Programming Language is *

1 punto

- ☐ Oracle
- ☐ Duke
- ☒ James Gosling

8. Encapsulation is implemented by the keyword *

1 punto

- ☐ public
- ☐ void
- ☒ private

9. Aggregation, composition and association in a class diagram are relationships between classes that are implemented in code using

* 1 punto

- ☐ attributes
- ☐ methods
- ☒ packages

10. Dependency in a class diagram, is a relationship between classes that are implemented in

* 1 punto

- ☐ variables
- ☐ classes
- ☒ methods

GitHub skills (5 minutes)

11. Match each of the following Git commands to its purpose *

5 puntos

	clone	add	commit	push	pull
Put one or more new, changed, or deleted files under version control	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Create a replica of remote repository into folder on the local system	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make a new version	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sync any new versions on the local system with the remote system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Sync any new versions on the remote system with the local system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

More OOP Fundamentals (5minutes)

12. What does it mean to instantiate a class object? *

1 punto

- ☐ duplicate a class
- ☐ delete a class
- ☒ create an object from the class
- ☐ connect two classes to each other

13. A constructor is a *

1 punto

- ☐ variable
- ☐ class
- ☒ attribute
- ☐ method

14. These diagrams help organize and model the requirements of a system * showing the cases of use and actors? 1 punto

- ☐ sequence diagrams
- ☐ collaboration diagrams
- ☒ use case diagrams
- ☐ class diagram

15. A getter is a *

1 punto

- ☒ method
- ☐ attribute
- ☐ class
- ☐ variable

16. What name must have a constructor in Java? *

1 punto

- ☐ a verb
- ☐ the name of the package
- ☐ any name
- ☒ the same name as the class

True or False (10 minutes)

17. Classification (the noun) is the process of group objects together into sets based on common properties * 1 punto

- ☐ True
- ☒ False

18. Classification (the verb) or "class" is a set of objects that have the same kinds of attributes and methods * 1 punto

- ☒ True
- ☐ False

19. One way to find potential classes in a system is to document a high-level description of the system and look for nouns. Those nouns are most likely to represent meaningful classes. * 1 punto

- ☒ True
- ☐ False

20. Use cases are used to document the requirements (the goals) of a system * 1 punto

- ☒ True
- ☐ False

21. C++, C# and Java are structured programming languages * 1 punto

- ☐ True
- ☒ False

22. Object Oriented code makes it easy to add new classes without modifying existing functions

* 1 punto

- ☒ True
- ☐ False

23. C ++ and Java are declarative programming languages *

1 punto

- ☐ True
- ☒ False

24. A method that is called from another method inside the same class should be defined later in the same class, i.e., after the method that called it

* 1 punto

- ☐ True
- ☒ False

25. WheelsList is a good name for a variable *

1 punto

- ☐ True
- ☒ False

26. A good programming practice is to use nouns to name the methods *

1 punto

- ☐ True
- ☒ False
- ☐ Otro: _____

Reverse Engineering skills, from code to UML (15 minutes)

27. Classes + Relations (Reverse Engineering). Draw the class diagram corresponding to the following code. Convert every attribute to associations, aggregations, compositions or dependencies, with appropriate names and multiplicity constraints (Upload the Png/Jpg file here, and the vpp and png file to the repository):

★ 10 puntos

```
/** @author OOP|instructors */
public class POOExam1P27 {
    public static void main(String[] args) {
        E e = new E();Question10
        C c = new C();
        e.m2(c);
        //Optional code
        A a = new A();
        B b1 = new B();
        B b2 = new B();
        a.m1(b1, b2);
    }
}

public class A {
    private B b1;
    private B b2;
    /**
     * This method uses two objects of type B
     * @param x of type B
     * @param y of type B
     */
    public void m1(B x, B y){
    }
}

public class B {
}

public class C {
    private B b;
}

public class E {
    private A a;
    private B[] b = new B[10];
    /**
     * This method will allow to use an object of type C, and returns nothing
     * @param z this is an object of type C
     */
    public void m2(C z) {
    }
}
```



ClassDiagramFor... X

Reading UML (5 minutes)

Based on the previous answer (Class diagram). Answer the following questions with an integer number. use digits. DON'T use words

28. How many associations is the B class connected to? *

2 puntos

3

29. How many associations is the A class connected to? *

2 puntos

2

30. The multiplicity constraint between C and B, on the class B is? *

2 puntos

1

31. How many dependencies is the A class connected to? *

2 puntos

1

32. The maximum value of the multiplicity constraint between E and B, on the B class is? *

2 puntos

0



Esta pregunta es obligatoria