1. The television can change channels, increase volume, decrease volume; this is included in the definition of....

   a) state
   b) structure
   c) behavior
   d) class

2. In the **composition** relationship, what happens to the part object when the main object is deleted?

   a) There is no effect on the part object
   b) The part object becomes an independent class
   c) The part object remains
   d) The part object is deleted along with the main object

3. The relationship with multiplicity on **Teacher** is **1** and on **Student** is **0..***, what does this multiplicity mean?

   a) One teacher can only teach one student
   b) a teacher can teach several students or none at all
   c) A teacher can only teach many students and cannot teach just one student
   d) one student must be taught by many teachers

4. Which of the following is true about **private** in access modifiers?

   a) Attributes or methods that are private can only be accessed outside the class
   b) Attributes or methods that are private can only be accessed within that class
   c) Attributes or methods that are private can only be accessed from subclasses
   d) Attributes or methods that are private can be accessed from any class

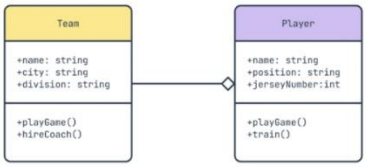
5. Representation of each entity involved in the system with a set of variables is called

   a) Object
   b) Blueprint
   c) Class
   d) Attribute

6. Which of the following is a **benefit** of using encapsulation?

   a) Attributes and methods are easier to modify directly
   b) Data is more open to access
   c) Data is hidden from external access, making it more secure
   d) All methods must be public

7.



Based on the following class diagram, what is the relationship between team and player, where the player can move to another team or is free?

a) Aggregation
b) Association
c) Composition
d) Inheritance

8. In OOP, **method** is used for:

a) Defining behaviors or functions that can be performed by an object
b) Representing static data within a class
c) Storing temporary data
d) Deleting unused objects

9. In the concept of class relations, what is meant by **inheritance?**

a) The ability of a class to inherit attributes and methods from another class
b) The ability of a class to delete descendant objects
c) The ability of a class to execute the same function
d) The ability of a class to access methods of other classes

10. How do you declare a **class** in Java?

a) public class ClassName { }
b) public ObjectName { }
c) public object class{ }
d) public class ( )

11. What does the multiplicity **1..*** mean in the relationship between the class **Order** and the class **Item**?

a) One order can contain one or more items
b) Each item must have exactly one order
c) one item can only be ordered once
d) one item cannot be in the same order

12. If you want to call the **pinjamBuku** method on the **buku1** object, what is the correct statement?

a) Buku.pinjam();
b) buku1.pinjamBuku();
c) Buku.pinjamBuku();
d) Buku1.pinjamBuku1();

13. In OOP, what is meant by **has-a** relationship

a) Relationship between methods and attributes that belong to the same class

b) Associate relationship where one class has another class as part of its attributes

c) Relationship between two objects that have attributes

d) Relationship between a class and a subclass or child class

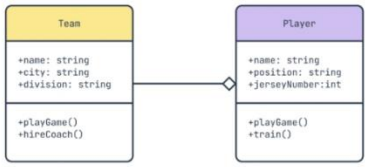
14. What is the function of a constructor in a class?

a) to add new methods to the class

b) to initialize a new object when created

c) to delete unused objects

d) to store temporary data

15. 

Based on the class diagram, what are the attributes of Class: Team?

a) playGame, train

b) playGame, hireCoach

c) name, city, division

d) name, position, jerseyNumber

16. A library wants to create a book management system, how do you declare the object **book1** from the class **Book**?

a) Book book1 = new Book();

b) Book book1 = new Book[];

c) Book book1 = Book();

d) Book book1 = Book[];

17. What is the function of **multiplicity notation** in a class diagram?

a) States the number of methods in a class in relation

b) Indicates the number of classes present in a system

c) Indicates the number of objects that can be connected in a relationship between classes

d) Determines the number of attributes in a class

18. What is the function of the **this** keyword in Java OOP?

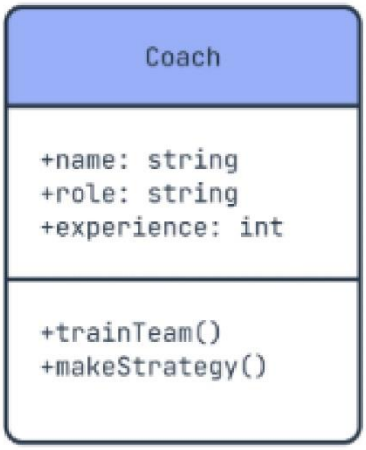
a) Refers to the current object

b) Refers to a different object

c) Refers to another class currently

d) Refers to the superclass

19.



In the Coach class, there is an attribute with a + modifier. What does this modifier mean?

a) private
b) public
c) package
d) protected

20. What is meant by **class relation** in OOP?

a) Relationship between one object and another object
b) Relationship between functions and variables
c) Relationship between variables in a class
d) Relationship between one class and another class

21. Why is the **composition** relationship used between the class **Book** and **Chapter**?

a) Because each chapter can exist independently without a book
b) Because books and chapters do not depend on each other and can exist separately
c) Because a book can exist without chapters, but chapters can be deleted
d) Because chapters can only exist as part of a book, and if the book is deleted, the chapters will also be deleted

22. What are the main elements that are usually displayed in a **class diagram**?

a) Class, attributes, methods
b) Class, objects, interfaces
c) Variables, methods, objects
d) Methods, inheritance, objects

23. What is the difference between **composition** and **aggregation** in class relations?

a) Composition means one class depends on another class, while aggregation does not depend
b) Composition means classes inherit from each other, while aggregation means classes are separate
c) Composition does not involve objects, while aggregation involves objects
d) Composition and aggregation are the same terms

24. There is a class diagram with a class **Employee** that has attributes **name**, **nip**, and a method **salary()** and a subclass **Manager** that has a method **meeting()**, what is the relationship between Employee and Manager?

a) Association
b) Aggregation
c) Inheritance
d) Composition

25. Below is an example of a **method** that is commonly used to obtain values from attributes that are **private..**

a) Setter
b) Getter
c) Constructor
d) Destructor

26. What is the function of the **protected** keyword in OOP?

a) Allows access to attributes or methods only from within the same class
b) Allows access from the same class and subclasses
c) Completely restricts access
d) Allows access from outside the class

27. What is the function of a **setter** in the concept of encapsulation?

a) Delete an object from the system
b) Set the value of a private attribute
c) Retrieve the value from a private attribute
d) Create an instance of a class

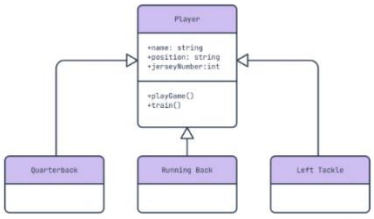
28. Which of the following is **not included** as an example of **access modifier** in OOP?

a) Private
b) Secure
c) Protected
d) Public

29. The characteristic of programming where the program is divided into functions/procedures and changes in features can disrupt the entire system is…

a) Object-oriented
b) Project-based
c) Structured
d) front-end

30.



What relation does the following class diagram use?

a) Composition

b) Association

c) Aggregation

d) Inheritance