1. Journal has many articles. An article can refer to many other articles. Choose the best class diagram modeling the Journal:

A diagram of a journal

AI-generated content may be incorrect.

1. Diagram D
2. Diagram C
3. **Diagram A**
4. Diagram B
5. A company has many employees. An employee can work for many companies. What is the relationship between two class “company” and employee

a. Inheritance

b. Composition

**c. Aggregation**

d. Dependency

1. A company belongs to only a group. Which is the relationship between two classes “Company" and "Group"?

a. Aggregation

b. Dependency

c. **Composition**

d. Association

1. What are main types of responsibility of class/object?

a. **Know and Do**

b. Do and Implementation

c. Implementation and Know

d. Realization and Inheritance

1. While employees work at office, many employees share the same room. What is the relationship between two class “employee” and “office” ?

a. Composition

b. **Association**

c. Dependency

d. Inheritance

6. Which statement is TRUE regarding to state diagram?

a. State diagram focus on the behavior of actors, ordered by events.

**b. State diagram focus on the behavior of objects, ordered by events.**

c. State diagram focus on the behavior of use cases, ordered by actors.

d. State diagram focus on the behavior of classes, ordered by objects.

7. What is the primary purpose of a class diagram in system analysis and design?

a. To represent the dynamic behavior of the system

b. **To represent the static view of the system**

c. To show user interactions with the system

d. To define the hardware architecture

8. Which phase is the conceptual/analysis class diagram primarily constructed in?

a. Design phase

b. Implementation phase

**c. Analysis phase**

d. Testing phase

9. What is an association class used for?

a. To represent inheritance

**b. To treat an association as a class with attributes**

c. To define abstract classes

d. To show dynamic behavior

10. What does aggregation express in a class diagram?

a. A weak connection between classes

**b. A "whole-part" or "belongs to" relationship**

c. A dependency on another class

d. A bidirectional association

11. How does composition differ from aggregation?

a. It is a weaker form of association

b. **Parts are destroyed if the whole is destroyed**

c. It allows multiple associations

d. It is bidirectional by default

12. What is the substitution principle in generalization/inheritance?

a. Subclasses cannot override superclass methods

**b. Subclass objects can replace superclass objects**

c. Superclasses inherit from subclasses

d. Subclasses are independent of superclasses

13. What is an abstract class?

a. A class with no attributes

**b. A class with no instances**

c. A class with only private methods

d. A class with no relationships

14. What is a conceptual class in the context of building class diagrams?

a. A class with implementation details

**b. A concept in the studied domain**

c. A class with no attributes

d. A class with dynamic behavior

15. What should be avoided when identifying attributes for a class?

**a. Adding too many attributes to a single class**

b. Using primitive data types

c.Defining attribute visibility

d.Specifying multiplicity