1. Which of the below is not a valid design pattern?

a) Singleton

b) Factory

c) Command

**d) Java**

2. Which of the below author is not a part of GOF (Gang of Four)?

a) Erich Gamma

**b) Gang Pattern**

c) Richard Helm

d) Ralph Johnson

3. Which of the below is not a valid classification of design pattern?

a) Creational patterns

b) Structural patterns

c) Behavioural patterns

**d) Java patterns**

4.Which design pattern ensures that only one object of particular class gets created?

**a) Singleton pattern**

b) Filter pattern

c) State pattern

d) Bridge pattern

5. Which design pattern suggests multiple classes through which request is passed and multiple but only relevant classes carry out operations on the request?

a) Singleton pattern

**b) Chain of responsibility pattern**

c) State pattern

d) Bridge pattern

6. Which design pattern represents a way to access all the objects in a collection?

**a) Iterator pattern**

b) Facade pattern

c) Builder pattern

d) Bridge pattern

7. What does MVC pattern stands for?

a) Mock View Control

**b) Model view Controller**

c) Mock View Class

d) Model View Class

8. Is design pattern a logical concept.

**a) True**

b) False

9. Which of the following is a design pattern?

a) Behavioral

b) Structural

c) Abstract Factory

**d) All of the mentioned**

10. The recurring aspects of designs are called design

**a) patterns**

b) documents

c) structures

d) methods

11. Design pattern is a solution to a problem that occurs repeatedly in a variety of contexts.

**a) True**

b) False

12. Which pattern prevents one from creating more than one instance of a variable?

a) Factory Method

**b) Singleton**

c) Observer

d) None of the mentioned

13. In factory method pattern, the framework must instantiate classes but it only knows about the abstract classes, which it cannot initiate. How would one solve this problem?

a) encapsulating the knowledge of which document subclass to is to be created and

b) moving this knowledge out of the framework

c) instantiating the application specific documents without knowing their class

**d) all of the mentioned**

14. Which of the following is true about design patterns?

a) Design patterns represent the best practices used by experienced object-oriented software developers.

b) Design patterns are solutions to general problems that software developers faced during software development.

c) Design patterns are obtained by trial and error by numerous software developers over quite a substantial period of time.

**d) All of the above.**

15. Which of the following describes the Builder pattern correctly?

**a) This pattern builds a complex object using simple objects and using a step by step approach.**

b) This pattern refers to creating duplicate object while keeping performance in mind.

c) This pattern is used when creation of object directly is costly.

d) This pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently.

16. Which of the following pattern involves a single class which is responsible to create an object while making sure that only single object gets created?

a) Factory Pattern

b) Abstract Factory Pattern

**c) Singleton Pattern**

d) Transfer Object Pattern

17. Factory pattern is one of most used design pattern in Java.

**a) TRUE**

b) FALSE

c) Can be true or false

d) Can not say

18. In how many steps Singleton class in java created?

a) 1

**b) 2**

c) 3

d) 4

Explanation: It is two step process. First, make the constructor private so that new operator cannot be used to instantiate the class. Return an object of the object if not null otherwise create the object and return the same via a method.

19. Can we create a clone of a singleton object?

**a) Yes**

b) No

c) Can be yes or no

d) Can not say

20. Which of the following characteristics is not attributed to the principles of design patterns?

a) Extensible

**b) Not reusable**

c) Multiple solution catalogs

d) Documented solution