CORE JAVA MCQs

---

1. What is the output?

```
int a = 10;
System.out.println(a++);
```

A) 11
B) 10
C) 9
D) Compilation error

2.

```
System.out.println(5 + 2 + "3");
```

A) 10
B) 73
C) 53
D) 723

3.

```
System.out.println("5" + 2 + 3);
```

A) 10
B) 523
C) 55
D) Error

---

4. Which is NOT a primitive?

A) int
B) float
C) String
D) char

5.

```
int x=5;
if(x=10)
System.out.println("Yes");
```

A) Yes
B) No output
C) Compilation error
D) Runtime error

6.

```
for(int i=0;i<3;i++);
System.out.println(i);
```

A) 0
B) 3
C) Error
D) Infinite

7.

```
int[] a={1,2,3};
System.out.println(a.length);
```

A) 2
B) 3
C) 4
D) Error

8.

```
int[] a=new int[3];
System.out.println(a[0]);
```

A) 1
B) null
C) 0
D) Error

---

9. Which supports multiple inheritance?

A) Class
B) Interface
C) Abstract class
D) Object

10.

```
class A{
void show(){System.out.println("A");}
}
class B extends A{
void show(){System.out.println("B");}
}
A a=new B();
a.show();
```

A) A
B) B
C) Error
D) None

---

11. Which is runtime polymorphism?

A) Overloading
B) Overriding
C) Constructor
D) Encapsulation

12.

```
final int x=10;
x=20;
```

A) Works
B) 20

C) Error
D) Runtime exception

---

13. Which keyword prevents inheritance?

A) static
B) private
C) final
D) abstract

14.

```
try{
int a=10/0;
}catch(Exception e){
System.out.println("Error");
}
```

A) Crash
B) Error
C) 0
D) Compile error

---

15. Parent of all exceptions?

A) Error
B) Throwable
C) RuntimeException
D) Object

---

16. Checked exception example?

A) ArithmeticException
B) NullPointerException
C) IOException
D) ArrayIndexOut

17.

```
String s=null;
System.out.println(s.length());
```

A) 0
B) null
C) NPE
D) Compile error

---

18. Which block always executes?

A) try
B) catch
C) finally
D) throw

19.

```
int a[]=new int[2];
System.out.println(a[3]);
```

A) 0
B) 3
C) Runtime error
D) Compile error

---

20. Constructor return type?

A) void
B) int
C) none
D) Object

---

21. Method overloading depends on?

A) Return type
B) Name

C) Parameters
D) Access modifier

---

22. Default value of boolean?

A) true
B) false
C) null
D) 0

23.

static int x=5;

Means?

A) Object variable
B) Class variable
C) Local
D) Final

24.

this()

Used for?

A) Call method
B) Call constructor
C) Call parent
D) Exit

---

25. Parent constructor keyword?

A) this
B) parent
C) super
D) base

26.

```
interface A{
void show();
}
```

Methods are by default?

A) private
B) protected
C) public abstract
D) static

---

27. Which allows abstraction?

A) Interface
B) Abstract class
C) Both
D) None

28.

```
abstract class A{
abstract void run();
}
```

Can A be instantiated?

A) Yes
B) No
C) Sometimes
D) Only main

29.

```
String s="Java";
s.concat("Lang");
System.out.println(s);
```

A) JavaLang
B) Java
C) Error
D) null

---

30. String is?

A) Mutable
B) Immutable
C) Dynamic
D) Static

---

31. StringBuilder is?

A) Immutable
B) Mutable
C) Final
D) Slow

32.

```
StringBuilder sb=new StringBuilder("Hi");
sb.append("All");
System.out.println(sb);
```

A) Hi
B) HiAll
C) Error
D) null

---

33. Default array value of object?

A) 0
B) null
C) empty
D) undefined

34.

```
int[][] a={{1,2},{3,4}};
System.out.println(a[1][0]);
```

A) 1
B) 2
C) 3
D) 4

35.

```
class A {
        public static void f() {
        System.out.println("fA");   }}
    class B extends A{
        public static void f() {
        System.out.println("fB");   }
        public static void main(String[] args) {
        A a= new B();
        a.f();   }}
```

What will happen on compilation or execution of code?

A. **fA**
B. **fB**
C. **Code will not compile**
D. **Code will throw runtime error**

36.

Integer i=10;
int j=i;

Called?

A) Boxing
B) Casting
C) Unboxing
D) Wrapping

37.

int i=10;
Integer j=i;

A) Unboxing
B) Boxing
C) Casting
D) Error

---

38. JVM stands for?

A) Java Virtual Machine
B) Java Variable Method
C) Joint VM
D) None

---

39. Which runs first?

A) constructor
B) main
C) static block
D) object

40.

static{

System.out.println("Hi");
}

When executed?

A) Object creation
B) Program end
C) Class loading
D) main end

---

41. Can main be overloaded?

A) Yes
B) No
C) Sometimes
D) Only static

42.

public static void main(String[] args)

args are?

A) Integer
B) Array
C) Object
D) List

---

43. Which is NOT OOPS pillar?

A) Encapsulation
B) Inheritance
C) Compilation
D) Polymorphism

---

44. Private members accessible?

A) Same class
B) Same package
C) Subclass
D) Everywhere

---

45. Default access modifier scope?

A) Same class
B) Same package
C) Everywhere
D) Subclass only

46.

class Test{}

Default constructor exists?

A) Yes
B) No
C) Sometimes
D) Only static

47.

throw new Exception();

Used to?

A) Catch
B) Create
C) Explicit throw
D) Handle

48.

throws IOException

Means?

A) Handle
B) Declare
C) Catch
D) Ignore

---

49. Which is unchecked?

A) IOException
B) SQLException
C) NullPointerException
D) FileNotFound

---

50. Can we have multiple catch?

A) Yes
B) No
C) Only one
D) Only runtime

---

51. Which collection allows duplicates?

A) Set
B) Map
C) List
D) Tree

---

52. HashMap allows?

A) Duplicate keys
B) One null key
C) No null
D) Sorted

---

53. Which preserves insertion order?

A) HashMap
B) TreeMap
C) LinkedHashMap
D) Hashtable

---

54. ArrayList is?

A) Synchronized
B) Thread-safe
C) Not synchronized
D) Immutable

55.

List l=new ArrayList();

Type?

A) Generic
B) Raw
C) Final
D) Static

---

56. Which is faster?

A) Array
B) ArrayList
C) Vector
D) Map

57.

int x=1;
x+=2;

Value?

A) 1
B) 2

C) 3
D) Error

58.

System.out.println(10/3);

A) 3.33
B) 3
C) 0
D) Error

59.

double d=10/3;

Value?

A) 3.33
B) 3.0
C) Error
D) 0

---

60. Which supports generics?

A) Primitive
B) Class
C) Interface
D) Both B & C

---

61. Can interface have default methods?

A) Yes
B) No
C) Only static
D) Only private

---

62. Which keyword creates object?

A) create
B) new
C) make
D) alloc

63.

Object o=new String("Hi");

Type of o?

A) String
B) Object
C) Both
D) None

64.

String s1="A";
String s2="A";

Same memory?

A) Yes
B) No
C) Sometimes
D) Error

---

65. Which area stores String literals?

A) Heap
B) Stack
C) SCP
D) Register

66.

int a[]={};

Size?

A) 0
B) 1
C) Error
D) null

67.

return;

Means?

A) Exit method
B) Continue
C) Break
D) Stop JVM

---

68. Can constructor be private?

A) Yes
B) No
C) Only static
D) Only abstract

---

69. Singleton uses?

A) public constructor
B) private constructor
C) abstract constructor
D) static constructor

---

70. Which keyword stops method override?

A) final
B) static

C) private
D) abstract

---

71. Method hiding uses?

A) override
B) static
C) super
D) this

72.

static void test(){}

Belongs to?

A) Object
B) Class
C) Interface
D) Package

---

73. JVM memory for objects?

A) Stack
B) Heap
C) Method area
D) Register

74.

break;

Used in?

A) Loop
B) Switch
C) Both
D) Method

---

75. Which is NOT keyword?

A) class
B) static
C) Integer
D) final

---

76. Which converts primitive to object?

A) Casting
B) Boxing
C) Unboxing
D) Parsing

77.

System.exit(0);

Does?

A) Stops loop
B) Ends JVM
C) Breaks method
D) Continue

---

78. Can interface have variables?

A) Yes (public static final)
B) No
C) private
D) protected

79.

int i;
System.out.println(i);

A) 0
B) null
C) Compile error
D) Runtime

---

80. Local variables default value?

A) 0
B) null
C) No default
D) false

---

81. Which keyword handles exception?

A) throw
B) throws
C) catch
D) finally

82.

class A{}
class B{}

Relation?

A) IS-A
B) HAS-A
C) None
D) Both

---

83. Which supports HAS-A?

A) Inheritance
B) Composition
C) Polymorphism
D) Overriding

84.

List<Integer> l=new ArrayList<>();

Feature?

A) Raw
B) Autoboxing
C) Generics
D) Casting

---

85. Which collection is synchronized?

A) ArrayList
B) Vector
C) HashMap
D) HashSet

---

86. Which exception during compile?

A) NullPointer
B) IOException
C) Arithmetic
D) IndexOut

---

87. Marker interface?

A) Runnable
B) Serializable
C) Comparable
D) Iterator

---

88. Which is functional interface?

A) Runnable
B) Serializable

C) Cloneable
D) Marker

---

89. Lambda introduced in?

A) Java 5
B) Java 6
C) Java 7
D) Java 8

---

90. Which supports stream API?

A) Java 6
B) Java 7
C) Java 8
D) Java 5

---

91. Which allows multiple catch in single block?

A) Java 6
B) Java 7
C) Java 5
D) Java 8

92.

```
int x=10;
System.out.println(++x);
```

A) 10
B) 11
C) 9
D) Error

93.

String s=new String("A");

Stored in?

A) SCP only
B) Heap
C) Stack
D) Register

---

94. Which is abstract method?

A) with body
B) without body
C) static
D) final

---

95. Can abstract class have constructor?

A) Yes
B) No
C) Only static
D) Only default

---

96. Which keyword used to inherit class?

A) implements
B) extends
C) inherit
D) using

---

97. Which keyword for interface?

A) extends
B) implements
C) inherit
D) super

98.

int a=010;

Value?

A) 10
B) 8
C) 2
D) Error

99.

System.out.println(1==1.0);

A) true
B) false
C) Error
D) null

100.

char c='A';
System.out.println(c+1);

A) B
B) 66
C) A1
D) Error

ANSWER KEY (ONLY HERE)

1:B 2:B 3:B 4:C 5:C 6:C 7:B 8:C 9:B 10:B
11:B 12:C 13:C 14:B 15:B 16:C 17:C 18:C 19:C 20:C
21:C 22:B 23:B 24:B 25:C 26:C 27:C 28:B 29:B 30:B
31:B 32:B 33:B 34:C 35:C 36:C 37:B 38:A 39:C 40:C
41:A 42:B 43:C 44:A 45:B 46:A 47:C 48:B 49:C 50:A
51:C 52:B 53:C 54:C 55:B 56:A 57:C 58:B 59:B 60:D
61:A 62:B 63:B 64:A 65:C 66:A 67:A 68:A 69:B 70:A
71:B 72:B 73:B 74:C 75:C 76:B 77:B 78:A 79:C 80:C

81:C 82:C 83:B 84:C 85:B 86:B 87:B 88:A 89:D 90:C
91:B 92:B 93:B 94:B 95:A 96:B 97:B 98:B 99:A 100:B

==========

CORE PYTHON MCQs

1.

```
a = 10
print(a)
```

A) "10"
B) 10
C) Error
D) None

2.

```
print(type(5))
```

A) int
B) <class 'int'>
C) integer
D) number

3.

```
print(5 + 2 * 3)
```

A) 21
B) 11
C) 17
D) 15

4.

```
print("5" + "2")
```

A) 7
B) 52

C) Error
D) 10

5.

print("5" + 2)

A) 7
B) 52
C) Error
D) 10

6.

a = [1,2,3]
print(len(a))

A) 2
B) 3
C) 4
D) Error

7.

a = [1,2,3]
print(a[-1])

A) 1
B) 2
C) 3
D) Error

8.

a = [1,2,3]
a.append(4)
print(a)

A) [1,2,3]
B) [4,1,2,3]

C) [1,2,3,4]
D) Error

9.

```
print(bool(0))
```

A) True
B) False
C) 0
D) Error

10.

```
print(bool(" "))
```

A) False
B) True
C) None
D) Error

11.

```
x = 5
if x == 5:
  print("Yes")
```

A) Yes
B) No
C) Error
D) None

12.

```
for i in range(3):
  print(i)
```

A) 1 2 3
B) 0 1 2

C) 0 1 2 3
D) Error

13.

print(list(range(2,6)))

A) [2,3,4,5]
B) [2,3,4,5,6]
C) [3,4,5]
D) Error

14.

a = (1,2,3)
a[0] = 5

A) Works
B) Error
C) Prints 5
D) None

15.

d = {"a":1,"b":2}
print(d["a"])

A) a
B) 1
C) 2
D) Error

16.

d = {}
print(type(d))

A) list
B) set

C) dict
D) tuple

17.

```
s = {1,2,3,3}
print(len(s))
```

A) 4
B) 3
C) 2
D) Error

18.

```
a = [1,2,3]
print(a*2)
```

A) [2,4,6]
B) [1,2,3,1,2,3]
C) Error
D) None

19.

```
print(10/3)
```

A) 3
B) 3.0
C) 3.333…
D) Error

20.

```
print(10//3)
```

A) 3
B) 3.33
C) 4
D) Error

21.

print(type(None))

A) None
B) null
C) <class 'NoneType'>
D) Error

22.

x = "Python"
print(x[1])

A) P
B) y
C) t
D) Error

23.

print("Python"[::-1])

A) Python
B) nohtyP
C) Error
D) None

24.

a = [1,2,3]
print(a.pop())

A) 1
B) 2
C) 3
D) Error

25.

```
print(type(5.0))
```

A) int
B) float
C) double
D) Error

26.

```
def add(a,b):
  return a+b

print(add(2,3))
```

A) 23
B) 5
C) Error
D) None

27.

```
def test():
  pass
print(test())
```

A) pass
B) None
C) Error
D) 0

28.

```
x = lambda a: a+10
print(x(5))
```

A) 5
B) 10
C) 15
D) Error

29.

print(list(map(lambda x:x*2,[1,2,3])))

A) [2,4,6]
B) [1,2,3]
C) Error
D) None

30.

print(list(filter(lambda x:x>2,[1,2,3])))

A) [1,2]
B) [3]
C) Error
D) None

31.

```
try:
   print(10/0)
except:
   print("Error")
```

A) 0
B) Error
C) Crash
D) None

32.

```
try:
   print("A")
finally:
   print("B")
```

A) A
B) B

C) A B
D) Error

33.

print(type([]))

A) list
B) tuple
C) dict
D) set

34.

print(type(()))

A) list
B) tuple
C) dict
D) set

35.

print(type({}))

A) set
B) dict
C) list
D) tuple

36.

a = {1,2}
b = {2,3}
print(a & b)

A) {1}
B) {2}
C) {3}
D) Error

37.

print("a" in "cat")

A) True
B) False
C) Error
D) None

38.

print(2**3)

A) 6
B) 8
C) 9
D) Error

39.

print(round(3.6))

A) 3
B) 4
C) 3.6
D) Error

40.

print(sum([1,2,3]))

A) 5
B) 6
C) 7
D) Error

41.

```
print(min([3,1,2]))
```

A) 3
B) 1
C) 2
D) Error

42.

```
print(max([3,1,2]))
```

A) 3
B) 1
C) 2
D) Error

43.

```
a = [1,2,3]
b = a
b.append(4)
print(a)
```

A) [1,2,3]
B) [4]
C) [1,2,3,4]
D) Error

44.

```
a=[1,2]
b=a.copy()
b.append(3)
print(a)
```

A) [1,2,3]
B) [1,2]
C) [3]
D) Error

45.

```
print(bool([]))
```

A) True
B) False
C) Error
D) None

46.

```
x = 5
print(type(x) is int)
```

A) True
B) False
C) Error
D) None

47.

```
print(isinstance(5,int))
```

A) True
B) False
C) Error
D) None

48.

```
class A:
   pass
a=A()
print(type(a))
```

A) A
B) object
C) <class '**main**.A'>
D) Error

49.

```
class A:
   x=5
print(A.x)
```

A) 0
 B) 5
 C) Error
 D) None

50.

```
class A:
   def show(self):
       print("Hello")
A().show()
```

A) Hello
 B) Error
 C) None
 D) show

ANSWER KEY (ONLY HERE)

1:B 2:B 3:B 4:B 5:C 6:B 7:C 8:C 9:B 10:B
11:A 12:B 13:A 14:B 15:B 16:C 17:B 18:B 19:C 20:A
21:C 22:B 23:B 24:C 25:B 26:B 27:B 28:C 29:A 30:B
31:B 32:C 33:A 34:B 35:B 36:B 37:A 38:B 39:B 40:B
41:B 42:A 43:C 44:B 45:B 46:A 47:A 48:C 49:B 50:A

==========

PowerShell MCQs

---

1. What is PowerShell primarily used for?

A. Web development
B. System administration and automation
C. Game programming
D. Graphic design

---

2. Which command lists all running services?

A. `Get-Process`
B. `Show-Service`
C. `Get-Service`
D. `List-Service`

---

3. What is the correct file extension for a PowerShell script?

A. `.ps`
B. `.psh`
C. `.ps1`
D. `.powershell`

---

4. Which cmdlet displays files and folders?

A. `ls`
B. `dir`
C. `Get-ChildItem`
D. All of the above

---

5. How do you define a variable?

A. `var x = 10`
B. `x = 10`
C. `$x = 10`
D. `int x = 10`

---

6. Which symbol represents a variable?

A. `@`
B. `#`
C. `$`
D. `%`

---

7. What does `|` represent?

A. OR operator
B. Redirect
C. Pipeline
D. Background task

---

8. Which cmdlet is used to get help?

A. `Help`
B. `Get-Help`
C. `Show-Help`
D. `Help-Get`

---

9. What is the output of:

```
5 + "5"
```

A. 10
B. 55
C. Error
D. 5

---

10. Which cmdlet stops a service?

A. `Stop-Service`
B. `End-Service`

C. `Close-Service`
D. `Kill-Service`

---

11. Which command lists installed modules?

A. `Get-Module`
B. `Get-Module -ListAvailable`
C. `Show-Module`
D. `List-Module`

---

12. How do you create a function?

A.

create Test {}

B.

function Test {}

C.

def Test {}

D.

func Test {}

---

13. Which keyword handles exceptions?

A. `handle`
B. `catch`
C. `error`
D. `except`

---

14. What does `-Recurse` do?

A. Deletes files
B. Searches subfolders
C. Sorts output
D. Stops execution

---

15. Which cmdlet reads file content?

A. `Read-File`
B. `Open-File`
C. `Get-Content`
D. `Load-File`

---

16. What does `[CmdletBinding()]` do?

A. Compiles code
B. Creates module
C. Converts function to advanced cmdlet-style function
D. Exports function

---

17. Which cmdlet installs modules?

A. `Add-Module`
B. `Install-Module`
C. `Load-Module`
D. `New-Module`

---

18. How do you import a module?

A. `Use-Module`
B. `Load-Module`
C. `Import-Module`
D. `Enable-Module`

---

19. Which command outputs current directory?

A. `pwd`
B. `Get-Location`
C. Both A and B
D. `Show-Path`

---

20. Which operator compares values?

A. `=`
B. `==`
C. `-eq`
D. `:=`

Answers

1. B
2. C
3. C
4. D
5. C
6. C
7. C
8. B
9. B
10. A
11. B

12. B
13. B
14. B
15. C
16. C
17. B
18. C
19. C
20. C

==========

CI/CD MCQs

---

1. What does CI stand for?

A. Continuous Integration
B. Continuous Installation
C. Continuous Improvement
D. Continuous Inspection

---

2. What does CD usually mean in DevOps?

A. Code Deployment
B. Continuous Delivery / Continuous Deployment
C. Centralized Development
D. Controlled Delivery

---

3. What is the main goal of CI?

A. Manual testing
B. Faster coding
C. Automatically build and test code after every change
D. Replace developers

---

4. Which activity is part of Continuous Integration?

A. Writing documentation
B. Manual deployment
C. Automated builds and tests on every commit
D. Customer feedback

---

5. In CI/CD, what is a *pipeline*?

A. A network cable
B. A sequence of automated steps (build, test, deploy)
C. A database
D. A log file

---

6. Which of the following best describes Continuous Deployment?

A. Deploying once per month
B. Deploying only manually
C. Every successful build is automatically deployed to production
D. Deploying only on weekends

---

7. What is *Continuous Delivery*?

A. Code is always deployable, but deployment may be manual
B. Code is never tested
C. Deployment is blocked
D. Only QA can deploy

---

8. Which file commonly defines pipeline stages in Jenkins?

A. `pipeline.json`
B. `build.xml`
C. `Jenkinsfile`
D. `docker.yml`

(Used by Jenkins)

---

9. Which GitHub feature is used to build CI/CD workflows?

A. GitHub Issues
B. GitHub Wiki
C. GitHub Actions
D. GitHub Pages

(From GitHub)

---

10. Which command typically triggers a CI pipeline?

A. Creating a folder
B. Committing or pushing code
C. Restarting the PC
D. Opening VS Code

---

11. Which tool is commonly used to package applications into containers?

A. Maven
B. Gradle
C. Docker
D. Ant

(Docker)

---

12. Which platform is widely used to orchestrate containers in CD?

A. Tomcat
B. IIS
C. Kubernetes
D. Apache

(Kubernetes)

---

13. What is the purpose of automated testing in CI?

A. Replace developers
B. Slow down builds
C. Catch bugs early
D. Remove documentation

---

14. What is a *build artifact*?

A. A bug report
B. A compiled output (jar, exe, image, etc.)
C. A log file only
D. Source code

---

15. Which is a popular Git-based CI/CD platform besides Jenkins?

A. Notepad++
B. GitLab CI/CD
C. FileZilla
D. PuTTY

(GitLab)

---

16. What does “shift left” mean in CI/CD?

A. Test later
B. Deploy later
C. Perform testing and security earlier in the pipeline
D. Move code left

---

17. Which environment usually comes right after CI?

A. Production
B. Development
C. Staging / Test
D. Archive

---

18. What is rollback in CD?

A. Deleting code
B. Reverting to a previous stable version
C. Restarting server
D. Stopping pipeline

---

19. Why are small, frequent commits encouraged?

A. They slow pipelines
B. They reduce merge conflicts and failures
C. They increase bugs
D. They block deployments

---

20. Which is NOT a typical CI/CD stage?

A. Build
B. Test
C. Deploy
D. Designing UI

Answers

1. A
2. B

3. C
4. C
5. B
6. C
7. A
8. C
9. C
10. B
11. C
12. C
13. C
14. B
15. B
16. C
17. C
18. B
19. B
20. D

==========

Logging MCQs (20 Questions)

---

1. What is logging in software applications?

A. Compiling code
B. Storing application events and messages
C. Encrypting data
D. Running tests

---

2. Why is logging important?

A. Makes UI faster
B. Helps debugging and monitoring
C. Reduces memory usage
D. Replaces testing

---

3. Which log level usually indicates a serious failure?

A. info
B. debug
C. warn
D. error

---

4. Which of the following is NOT a common log level?

A. info
B. warn
C. error
D. compile

---

5. In Node.js, which is the simplest way to log messages?

A. logger.write()
B. console.log()
C. print()
D. echo()

---

6. Which library is commonly used for structured logging in Node.js?

A. Axios
B. Winston
C. Express
D. Lodash

---

7. What does this typically do?

```
logger.error("DB failed");
```

A. Stops Node.js
B. Logs an error message
C. Deletes database
D. Restarts server

---

8. What is a “transport” in Winston?

A. Network cable
B. UI theme
C. Log destination (console/file/etc.)
D. Database

---

9. What is the purpose of timestamps in logs?

A. Reduce file size
B. Improve UI
C. Track when events occurred
D. Encrypt logs

---

10. Which is a good logging practice?

A. Log passwords
B. Disable logs in production
C. Use log levels
D. Log only errors

---

11. What is a log file?

A. Source code
B. Binary executable
C. Stored record of application events
D. Database schema

---

12. Which tool is used for HTTP request logging in Express apps?

A. Morgan
B. Jest
C. Mocha
D. Nodemon

---

13. What does *centralized logging* mean?

A. Logs stored on developer PC
B. Logs sent to one central system
C. Logs deleted automatically
D. Logs stored in browser

---

14. ELK stands for:

A. Elastic – Log – Kernel
B. Error – Log – Key
C. Elasticsearch – Logstash – Kibana
D. Execute – Load – Kill

(Used with Elasticsearch, Logstash, and Kibana)

---

15. What is log rotation?

A. Deleting logs
B. Encrypting logs
C. Creating new log files periodically
D. Uploading logs to GitHub

---

16. Which log level is best for development troubleshooting?

A. error
B. warn
C. info
D. debug

---

17. What should NOT be logged?

A. Errors
B. API requests
C. Passwords / secrets
D. Startup messages

---

18. Why are structured (JSON) logs useful?

A. Smaller size
B. Easier machine parsing and searching
C. Better colors
D. Faster UI

---

19. What is usually logged in CI/CD pipelines?

A. UI screenshots
B. Build, test, deploy output
C. User passwords
D. Browser history

---

20. Which is a production best practice?

A. Use only console.log
B. Disable timestamps
C. Separate error logs
D. Avoid log files

Answers

1. B
2. B
3. D
4. D
5. B
6. B
7. B
8. C
9. C
10. C
11. C
12. A
13. B
14. C
15. C
16. D
17. C
18. B
19. B

20. C

==========

REST API & JWT – 20 MCQs

REST API Questions

---

1. What does REST stand for?

A. Remote Execution Service Technology
B. Representational State Transfer
C. Reliable Endpoint Service Transfer
D. Remote Endpoint Standard Technique

---

2. REST APIs primarily use which protocol?

A. FTP
B. SMTP
C. HTTP
D. TCP only

---

3. Which HTTP method is typically used to retrieve data?

A. POST
B. PUT
C. GET
D. DELETE

---

4. Which HTTP method is idempotent?

A. POST
B. GET
C. PATCH
D. CONNECT

---

5. Which HTTP status code means “Resource Created”?

A. 200
B. 201
C. 404
D. 500

---

6. What does HTTP status code 404 indicate?

A. Server error
B. Unauthorized
C. Resource not found
D. Success

---

7. In REST, what does “stateless” mean?

A. Server stores session
B. Server remembers client data
C. Each request contains all necessary information
D. Client stores logs

---

8. Which format is most commonly used in REST APIs?

A. XML only
B. YAML
C. JSON
D. CSV

---

9. In Express, which object is used to send JSON response?

A. req.json()
B. res.send()
C. res.json()
D. req.send()

---

10. What is the purpose of API versioning?

A. Increase speed
B. Prevent errors
C. Maintain backward compatibility
D. Encrypt requests

JWT Questions

---

11. What does JWT stand for?

A. Java Web Token
B. JSON Web Token
C. JavaScript Web Token
D. JSON With Token

---

12. A JWT is typically used for:

A. Data storage
B. File upload
C. Authentication and authorization
D. UI rendering

---

13. A JWT consists of how many parts?

A. 2
B. 3
C. 4
D. 5

---

14. The three parts of JWT are:

A. Header, Payload, Signature
B. Header, Body, Footer
C. Start, Data, End
D. Token, Key, Value

---

15. Where is JWT usually stored on the client side?

A. Database
B. LocalStorage / Cookies
C. Server RAM
D. HTML file

---

16. What is stored in the JWT payload?

A. Secret key
B. Encrypted password
C. User data / claims
D. HTML code

---

17. What is the purpose of JWT signature?

A. Encrypt the payload
B. Verify token integrity
C. Increase speed
D. Store user password

---

18. Which algorithm is commonly used to sign JWT?

A. RSA only
B. AES
C. HS256
D. MD5

---

19. What happens if the JWT signature is modified?

A. Nothing
B. Token becomes invalid
C. Server restarts
D. User auto-login

---

20. Which header is commonly used to send JWT in HTTP requests?

A. Content-Type
B. Authorization
C. Accept
D. Cache-Control

Answers

1. B
2. C
3. C
4. B
5. B
6. C
7. C
8. C
9. C
10. C

11. B

12. C

13. B

14. A

15. B

16. C

17. B

18. C

19. B

20. B