

JAVA MCQ –II

1 Given the following,

```
1. public class StringRef {  
2. public static void main(String [] args) {  
3. String s1 = "abc";  
4. String s2 = "def";  
5. String s3 = s2;  
6. s2 = "ghi";  
7. System.out.println(s1 + s2 + s3);  
8. }  
9. }
```

what is the result?

- A. abcdefghi
- B. abcdefdef
- C. **abcghidef**
- D. abcghighi
- E. Compilation fails.
- F. An exception is thrown at runtime.

2

Given the following,

```
11. String x = "xyz";  
12. x.toUpperCase(); //xyz  
13. String y = x.replace('Y', 'y');  
14. y = y + "abc";  
15. System.out.println(y);
```

what is the result?

- A. abcXyZ
- B. abcxyz
- C. **xyzabc**
- D. XyZabc
- E. Compilation fails.
- F. An exception is thrown at runtime.

3

Given the following,

```
13. String x = new String("xyz"); //2  
14. y = "abc";  
15. x = x + y;
```

how many String objects have been created?

- A. 2

- B. 3
- C. 4
- D. 5

4

Given the following,

```
14. String a = "newspaper";  
15. a = a.substring(5,7); //ap  
16. char b = a.charAt(1); //p  
17. a = a + b; //app  
18. System.out.println(a);  
what is the result?
```

- A. apa
- B. app
- C. apea
- D. apeg
- E. papp
- F. papa

5

Given the following,

```
4. String d = "bookkeeper";  
5. d.substring(1,7);  
6. d = "w" + d; //wbookkeeper  
7. d.append("woo");  
8. System.out.println(d);  
what is the result?
```

- A. wookkeewoo
- B. wbookkeeper
- C. wbookkeewoo
- D. wbookkeeperwoo
- E. Compilation fails.
- F. An exception is thrown at runtime.

6

```
import java.io.IOException;
```

```
class dd1
```

```
{
```

```
    public void d() throws IOException { }
```

```
}
```

```
class dd2 extends dd1
{
    public void d() throws Exception{ }
}
public class demo1 {
}
```

- A Causes compile time error
- B Valid
- C Runtime Exception

7

```
import java.io.IOException;

class dd1
{
    void d()throws IOException { }
}

class dd2 extends dd1
{
    public void d() throws Exception{ }
}
public class demo1 {
}
```

- A Causes compile time error
- B Valid
- C Runtime Exception

8

```
import java.io.IOException;

class dd1
{
    void d()throws IOException { }
}
```

```

class dd2 extends dd1
{
    public void d(){ }
}
public class demo1 {
}

```

- A Causes compile time error
- B Valid
- C Runtime Exception

9

```

import java.io.IOException;

class dd1
{
    void d() { }
}

class dd2 extends dd1
{
    public void d() throws IOException { }
}

public class demo1 {
}

```

- A Causes compile time error
- B Valid
- C Runtime Exception

10

```

import java.io.IOException;

class dd1
{
    void d() { }
}

class dd2 extends dd1
{
}

```

```

    public void d()throws NullPointerException { }
}
public class demo1 {
}

```

Ans: valid

11

Which collection class allows you to grow or shrink its size and provides indexed access to its elements, but whose methods are not synchronized?

- A. java.util.HashSet
- B. java.util.LinkedHashSet
- C. java.util.List
- D. java.util.ArrayList
- E. java.util.Vector

12 Which collection class allows you to access its elements by associating a key with an element's value, and provides synchronization?

- A. java.util.SortedMap
- B. java.util.TreeMap
- C. java.util.TreeSet
- D. java.util.HashMap
- E. java.util.Hashtable

13 Given the following,

```

12. TreeSet map = new TreeSet();
13. map.add("one");
14. map.add("two");
15. map.add("three");
16. map.add("four");
17. map.add("one");
18. Iterator it = map.iterator();
19. while (it.hasNext() ) {
20. System.out.print( it.next() + " " );
21. }

```

what is the result?

- A. one two three four
- B. four three two one
- C. four one three two
- D. one two three four one
- E. one four three two one

F. The print order is not guaranteed.

14 . Which collection class allows you to associate its elements with key values, and allows you to retrieve objects in FIFO (first-in, first-out) sequence?

- A. java.util.ArrayList
- B. java.util.LinkedHashMap
- C. java.util.HashMap
- D. java.util.TreeMap
- E. java.util.LinkedHashSet
- F. java.util.TreeSet

15 Given the following,

```
1.class MyThread extends Thread {  
2.  
3. public static void main(String [] args) {  
4. MyThread t = new MyThread();  
5. t.run();  
6. }  
7.  
8. public void run() {  
9. for(int i=1;i<3;++i) {  
10. System.out.print(i + "..");  
11. }  
12. }  
13. }
```

what is the result?

- A. This code will not compile due to line 4.
- B. This code will not compile due to line 5.
- C. 1..2..
- D. 1..2..3..
- E. An exception is thrown at runtime.

16

```
1.class MyThread extends Thread {  
2.  
3. public static void main(String [] args) {  
4. MyThread t;  
5. t.run();  
6. }  
7.  
8. public void run() {  
9. for(int i=1;i<3;++i) {
```

```
10. System.out.print(i + "..");  
11. }  
12. }  
13. }
```

what is the result?

- A. This code will not compile due to line 4.
- B. This code will not compile due to line 5.**
- C. 1..2..
- D. 1..2..3..
- E. An exception is thrown at runtime.

17

Which two of the following methods are defined in class Thread?

- A. start()**
- B. wait()
- C. notify()
- D. run()**
- E. terminate()

18

The following block of code creates a Thread using a Runnable target:

```
Runnable target = new MyRunnable();
```

```
Thread myThread = new Thread(target);
```

Which of the following classes can be used to create the target, so that the preceding code compiles correctly?

- A. public class MyRunnable extends Runnable{public void run(){}}
- B. public class MyRunnable extends Object{public void run(){}}
- C. public class MyRunnable implements Runnable{public void run(){}}**
- D. public class MyRunnable implements Runnable{void run(){}}
- E. public class MyRunnable implements Runnable{public void start(){}}

19

Given the following,

- 1. class MyThread extends Thread {
- 2.
- 3. public static void main(String [] args) {
- 4. MyThread t = new MyThread();
- 5. t.start();
- 6. System.out.print("one. ");
- 7. t.start();
- 8. System.out.print("two. ");

```
9. }  
10.  
11. public void run() {  
12. System.out.print("Thread ");  
13. }  
14. }
```

what is the result of this code?

- A. Compilation fails
- B. An exception occurs at runtime.
- C. Thread one. Thread two.
- D. The output cannot be determined.

20

Given the following,

```
1. public class MyRunnable implements Runnable {  
2. public void run() {  
3. // some code here  
4. }  
5. }
```

which of these will create and start this thread?

- A. new Runnable(MyRunnable).start();
- B. new Thread(MyRunnable).run();
- C. new Thread(new MyRunnable()).start();
- D. new MyRunnable().start();

21

Given the following,

```
1. class MyThread extends Thread {  
2.  
3. public static void main(String [] args) {  
4. MyThread t = new MyThread();  
5. Thread x = new Thread(t);  
6. x.start();  
7. }  
8.  
9. public void run() {  
10. for(int i=0;i<3;++i) {  
11. System.out.print(i + "..");  
12. }  
13. }  
14. }
```

what is the result of this code?

- A. Compilation fails.
- B. 1..2..3..

C. 0..1..2..3..

D. 0..1..2..

E. An exception occurs at runtime.

22

Given the following,

```
1. class Test {  
2.  
3. public static void main(String [] args) {  
4. printAll(args);  
5. }  
6.  
7. public static void printAll(String[] lines) {  
8. for(int i=0;i<lines.length;i++){  
9. System.out.println(lines[i]);  
10. Thread.currentThread().sleep(1000);  
11. }  
12. }  
13. }
```

the static method `Thread.currentThread()` returns a reference to the currently executing

Thread object. What is the result of this code?

A. Each String in the array *lines* will output, with a 1-second pause.

B. Each String in the array *lines* will output, with no pause in between because this method is not executed in a Thread.

C. Each String in the array *lines* will output, and there is no guarantee there will be a pause

because `currentThread()` may not retrieve this thread.

D. This code will not compile.

23

Assume you have a class that holds two private variables: *a* and *b*. Which of the following

pairs can prevent concurrent access problems in that class? (Choose all that apply.)

A. `public int read(int a, int b){return a+b;}`

`public void set(int a, int b){this.a=a;this.b=b;}`

B. `public synchronized int read(int a, int b){return a+b;}`

`public synchronized void set(int a, int b){this.a=a;this.b=b;}`

C. `public int read(int a, int b){synchronized(a){return a+b;}}`

`public void set(int a, int b){synchronized(a){this.a=a;this.b=b;}}`

D. `public int read(int a, int b){synchronized(a){return a+b;}}`

```
public void set(int a, int b){synchronized(b){this.a=a;this.b=b;}}
E. public synchronized(this) int read(int a, int b){return a+b;}
public synchronized(this) void set(int a, int b){this.a=a;this.b=b;}
F. public int read(int a, int b){synchronized(this){return a+b;}}
public void set(int a, int b){synchronized(this){this.a=a;this.b=b;}}
```

24

Which class or interface defines the wait(), notify(), and notifyAll() methods?

- A. Object**
- B. Thread
- C. Runnable
- D. Class

25

Which two are *true*?

- A. A static method cannot be synchronized.
- B. If a class has synchronized code, multiple threads can still access the nonsynchronized code.**
- C. Variables can be protected from concurrent access problems by marking them with the synchronized keyword.
- D. When a thread sleeps, it releases its locks.
- E. When a thread invokes wait(), it releases its locks.**

26

Which three are methods of the Object class? (Choose three.)

- A. notify();**
- B. notifyAll();**
- C. isInterrupted();
- D. synchronized();
- E. interrupt();
- F. wait(long msecs);**
- G. sleep(long msecs);
- H. yield();

27

Given the following,

1. public class WaitTest {
2. public static void main(String [] args) {
3. System.out.print("1 ");
4. synchronized(args){
5. System.out.print("2 ");

```

6. try {
7. args.wait();
8. }
9. catch(InterruptedException e){}
10. }
11. System.out.print("3 ");
12. }
13. }

```

what is the result of trying to compile and run this program?

- A. It fails to compile because the `IllegalMonitorStateException` of `wait()` is not dealt with in line 7.
- B. 1 2 3
- C. 1 3
- D. 1 2
- E. At runtime, it throws an `IllegalMonitorStateException` when trying to wait.
- F. It will fail to compile because it has to be synchronized on the *this* object.

28

Assume the following method is properly synchronized and called from a thread A on an object B:

```
wait(2000);
```

After calling this method, when will the thread A become a candidate to get another turn at the CPU?

- A. After thread A is notified, or after two seconds.
- B. After the lock on B is released, or after two seconds.
- C. Two seconds after thread A is notified.
- D. Two seconds after lock B is released.

29

Which two are *true*?

- A. The `notifyAll()` method must be called from a synchronized context.
- B. To call `wait()`, an object must own the lock on the thread. f
- C. The `notify()` method is defined in class `java.lang.Thread`. f
- D. When a thread is waiting as a result of `wait()`, it release its locks. t
- E. The `notify()` method causes a thread to immediately release its locks.
- F. The difference between `notify()` and `notifyAll()` is that `notifyAll()` notifies all waiting threads, regardless of the object they're waiting on. f

30

Which of the following methods throws a Checked Exception;

- A sleep
- B wait
- C notify
- D join
- E isAlive

31

Answer the following or fill in the blank.

1) Which package defines String and StringBuffer classes?

Ans java.lang

2) Which method can be used to obtain the length of the String?

Ans : length()

3) How do you concatenate Strings?

Ans : + or concat()

4) Which method can be used to compare two strings for equality?

Ans : equals(), compareTo(),

5) _Object_ is the superclass for all the classes

6) _____ keyword is used to prevent overriding methods. (final)

7) The sizeof data in java is platform independent

8) _____ is the default value for a String variable. null

9) _____ block in exception handling is executed for all cases finally

Ans :

10)

_____ is a unique method that gets called automatically during object creation.

Ans : constructor

11) Which method can be used to compare two strings for equality?

Ans :

12) _____ is the superclass for all the classes

13) _____ keyword is used to create shared variable. static

14 _____ are used in java 1.5 to represent meta data inside the java program. annotations

15 _____ Exception is thrown by :

```
String s="1223d"
```

```
Integer.parseInt(s); //NumberFormatException
```

32 Study the following snippet code and answer the questions: (5 marks)

```
Class A{
```

```
void m1(int x, float f){ } ---- A
```

```
void m1(int c){ } ---- B
```

```
}
```

```
Class B extends A{
```

```
void m1(int x,float f){ } ---- C
```

```
void m1(int x) {XXXX } -----D
```

```
}
```

```
Class C {
```

```
public static void main(...){
```

```
A ob=new B();
```

```

        ob.m1(10);-----E
        B ob1=new B();
        ob1.m1(12,13.4f);  -----F
    }
}

```

I At E statement _____ is called.

- A method marked as B
- B method marked as D**

II At F statement _____ is called C

- A method marked as A
- B method marked as B

III What does XXXX contain so that both B and D are called

iv What happens if D is modified to int m1(int x)

v A and C are _____ methods

33 Read the following code snippet. (2 marks)

```

public class Demo
{
    public Demo(){ }
    public void m(){ }
    public static void main(String abc[]){
        Demo d=new Demo();
        d=new Demo();
    }
}

```

I How many objects are created in the above code. 2

II how many objects are for deallocation 1

A 1 B none C 2

34 Read the following code and change the code according to the naming conventions.

(3 marks)

```
class employee
{
    int empcode;
    String empname;
    void getempcode(){ return empcode};
    void getempname(){return empname;}
    void setempname(String empname)
    {
        this.empname=empname;
    }
}
```

What is the output of the following.

```
int x=5,y=2;
float z=x/y;
//print z
```

The variables declared inside an interface are by default:

A static

B final

C static and final

35 Given the following,

```
1. class B extends A {  
2. int getID() {  
3. return id;  
4. }  
5. }  
6. class C {  
7. public int name;  
8. }  
9. class A {  
10. C c = new C();  
11. public int id;  
12. }
```

which are true about instances of the classes listed above?

- A. A is-a B
- B. B is-a A
- C. B has-a A
- D. C has-a A

36

```
1.     class MyThread extends Thread {  
2. static MyThread t;  
  
3. public static void main(String [] args) {  
4. t.run();  
6. }  
7.  
8. public void run() {  
9. for(int i=1;i<3;++i) {  
10. System.out.print(i + "..");  
11. }  
12. }  
13. }
```

what is the result?

- A. This code will not compile due to line 4.
- B. This code will not compile due to line 5.
- C. 1..2..
- D. 1..2..3..
- E. An exception is thrown at runtime.

37 Given the following,

```
String x = "xyz";  
String y = "xyz";
```

I What will `x==y` return?

A **true** B false

II What will `x.equals(y)` return

A **true** B false

38 Which of the following packages do you import to get system date.

A **java.util**

B java.lang

C java.sql

D None of the above

39

. Which collection class allows you to store elements in FIFO and allows duplicates.

A. **java.util.ArrayList**

B. java.util.TreeMap

C. java.util.TreeSet

D. java.util.HashMap

E. java.util.Hashtable

40

Which of the following Collection interfaces does not contain a get method.

A List

B **ArrayList**

C Map

D **Set**