

Sample Core Java Question Paper

1. Given the following code how could you invoke the Base constructor that will print out the string "base constructor";

```
class Base{
    Base(int i){
        System.out.println("base constructor");
    }
    Base(){
    }
}
```

```
public class Sup extends Base{
    public static void main(String argv[]){
        Sup s= new Sup();
        //One
    }
```

```
    Sup(){
        //Two
    }

    public void derived(){
        //Three
    }
}
```

- a) On the line After //One put Base(10);
- b) On the line After //One put super(10);
- c) On the line After //Two put super(10);
- d) On the line After //Three put super(10);

2. Which of the following methods can be legally inserted in place of the comment //Method Here? Select all the correct answers

```
class Base{
    void amethod(int i) { }
```

```
public class Derived extends Base{
    //Method Here
}
```

- a) void amethod(int i) { }
- b) protected void amethod(int i) { }
- c) public void amethod(int i) { }
- d) private void amethod(int i) { }

3. What is wrong with the following code?

```
class MyException extends Exception {}

public class Example{
    public void doTask() {
        try {
            bar( );
        } finally {
            baz( );
        } catch (MyException e) {}
    }
    public void bar( ) throws MyException {
        throw new MyException();
    }
    public void baz( ) throws RuntimeException {
        throw new RuntimeException();
    }
}
```

- a. Since the method foo() does not catch the exception generated by the method baz(), it must declare the RuntimeException in a throws clause.
- b. A try block cannot be followed by both a catch and a finally block.
- c. An empty catch block is not allowed.
- d. A catch block cannot follow a finally block.
- e. A finally block must always follow one or more catch blocks.

5. What is the output of following Code?

```
try{    int x=4, y=0, z=0; z = x/y;
        int b[ ]=null; k = b[0];
        System.out.println("End");
}catch(Exception e){
        System.out.println("exception" );
}catch(NullPointerException e){
        System.out.println("null pointer");
}
```

}

- a) End, Exception
- b) Exception, null pointer
- c) Exception
- d) Compiler error: Code is not reachable

6. What happens in this code fragment?

```
`    Rectangle a = new Rectangle(4,5);  
    Rectangleb = new Rectangle(4,5);  
    if (a==b)  
        System.out.println(" Same");  
    else  
        System.out.println(" Different");
```

- a) Prints "Different", because a and b points to two different objects
- b) Prints "Same", both have same content
- c) Compilation error: we can't use == to compare objects

7. In Java 8 method references help to point to methods by their names. Which symbol is used to invoke a method reference?

- a) ->
- b) ::
- c) .
- d) =>

8. Given:

```
public class Person {  
    private int id;  
    private String name;  
    // appropriate constructors  
    // setters and getters  
}  
  
List<Person> persons = new ArrayList<Person>();  
persons.add(new Person(100,"Smith"));  
persons.add(new Person(120,"Allan"));  
persons.add(new Person(301,"Barry"));
```

```
persons.add(new Person(101,"Kate"));
```

```
Collections.sort(persons);
```

```
for(Person person: persons) {  
    System.out.println(person.getId());  
}
```

What is the output of the above code?

- a) **Compilation Error**
- b) Prints: 100, 101, 120 and 301
- c) Prints: 120,301,101 and 100
- d) Runtime Exception

9) What is the result of compiling and executing the following program.

```
abstract class Account {  
    public String getAccountNo() {  
        return "SB100";  
    }  
}  
  
class SavingsAccount extends Account {  
    public double getBalance() {  
        return 0.0;  
    }  
}  
  
public class Test {  
    public static void main(String peace[]) {  
        Account account= new SavingsAccount();  
        System.out.println(account.getBalance());  
    }  
}
```

- a) Compilation error for line [Account account= new SavingsAccount();]
- b) **Compilation error for line [System.out.println(account.getBalance());]**
- c) Prints: 0.0
- d) Exception during runtime

10) Given:

```
Set<String> set = new TreeSet<>();  
set.add("E");  
set.add("D");  
set.add("E");  
set.add("B");  
set.add("A");
```

```
for(String s : set) {  
    System.out.print(s + " ");  
}
```

What is the output of executing above code?

- a) A B D E
- b) E D E B A
- c) E D B A
- d) A B D E E

11) Which of the following are equivalent to the below code?

```
new Comparator<String>() {  
    @Override  
    public int compare(String o1, String o2) {  
        return o1.length() - o2.length();  
    }  
}
```

- a) (String o1, String o2) ->{ return o1.length() - o2.length();}
- b) (o1, o2) ->{ return o1.length() - o2.length(); }
- c) (o1, o2) -> o1.length() - o2.length();
- d) ALL

12) You want to find out the value of the last element of an array.

You write the following code. What will happen when you compile and run it.?

```
public class Test{  
    public static void main(String argv[]){  
        int[] i = new int[5];  
        System.out.println(i[5]);  
    }  
}
```

- a) An error at compile time
- b) An error at run time
- c) The value 0 will be output
- d) The string "null" will be output

13) What is the value of "total" variable after executing below code?

```
int total = Arrays.stream(new int[]{ 1, 2, 3 })  
    .filter(i ->i >= 2)  
    .map(i ->i * 3)  
    .sum();
```

- a) 5
- b) 18
- c) 15
- d) 9

15) What's the visibility of a member if we don't mention the access modifier?

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

18) What is the output of this program?

```
class Evaluate {  
    public static void main(String args[]) {
```

```

        int arr[] = new int[] {0 , 1, 2, 3, 4, 5, 6, 7, 8, 9};
        int n = 6;
        n = arr[arr[n] / 2];
        System.out.println(arr[n] / 2);
    }
}
a) 3
b) 0
c) 6
d) 1

```

23)**Given:**

```

1 public class Person {
2. private String name;
3. public Person(String name) { this.name = name; }
4.     public boolean equals(Person p) {
5.         return p.name.equals(this.name);
6.     }
7. }

```

Which statement is true?

- A. The equals method does NOT properly override the Object.equals method.
- B. Compilation fails because the private attribute p.name cannot be accessed in line 5.
- C. To work correctly with hash-based data structures, this class must also implement the hashCode method.
- D. When adding Person objects to a java.util.Set collection, the equals method in line 4 will prevent duplicates.

----- Some Sample Subjective Programming Qs

a) Create a program to show multiple catch blocks and a finally block. The program should handle Arithmetic Exception, Null Pointer Exception and Array Index Out of Boundary Exceptions; if the program has these

exceptions. Please describe programs to handle all these exceptions.

b) Create a functional interface which has parameter based abstract method to show area of a square. Use a class to implement the interface and print out the area of square based on parameter value passed. Also use LAMBDA EXPRESSION to get the area of the square.

c) Create 3 threads to run the job of printing a counter from 2 to 10. Create the threads by using the Runnable Interface. Also check if the Threads are alive after finishing their job.