OverAll Topic:

1.Which metod of Pattern class returns boolean and which method returns Pattern object?

2.Unit Tests can execute Testing on which methods?

i.public

ii.abstract

iii.static

iv.default

3.The String class in java which allows a regex operation with minimal code are:-

i.String.matches()

ii.String.split()

iii.String.replaceAll()

iv.String.replace()

iv.All of the above

4.Which are position oriented opeartion:

i.List

ii.HashTable

iii.Queue

5.Methods of collection interface:

i.contains()

ii.containsAll()

iii.isEmpty()

iv.hasNext()

v.None of the above

6.forEach() is what kind of method?

i.Abstract method

ii.default method

iii.final method

iv.public method

7.In chaining of Constructor

i.Calling happens from bottom to top

ii.Execution happens from top to bottom

iii.none of the above

8.TreeSet is not sychronized.(True/False)

Abstract class:

1. Which among the following best describes abstract classes?  
a) If a class has more than one virtual function, it’s abstract class  
b) If a class have only one pure virtual function, it’s abstract class  
c) If a class has at least one pure virtual function, it’s abstract class  
d) If a class has all the pure virtual functions only, then it’s abstract class  
Answer: c  
Explanation: The condition for a class to be called abstract class is that it must have at least one pure virtual function. The keyword abstract must be used while defining abstract class in java.

2. Can abstract class have main() function defined inside it?  
a) Yes, depending on return type of main()  
b) Yes, always  
c) No, main must not be defined inside abstract class  
d) No, because main() is not abstract function  
Answer: b  
Explanation: This is a property of abstract class. It can define main() function inside it. There is no restriction on its definition and implementation.

3. If there is an abstract method in a class then, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
a) Class must be abstract class  
b) Class may or may not be abstract class  
c) Class is generic  
d) Class must be public  
Answer: a  
Explanation: It is a rule that if a class have even one abstract method, it must be an abstract class. If this rule was not made, the abstract methods would have got skipped to get defined in some places which is undesirable with the idea of abstract class.

4. If a class is extending/inheriting another abstract class having abstract method, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
a) Either implementation of method or making class abstract is mandatory  
b) Implementation of the method in derived class is mandatory  
c) Making the derived class also abstract is mandatory  
d) It’s not mandatory to implement the abstract method of parent class  
Answer: a  
Explanation: Either of the two things must be done, either implementation or declaration of class as abstract. This is done to ensure that the method intended to be defined by other classes gets defined at every possible class.

5. Abstract class A has 4 virtual functions. Abstract class B defines only 2 of those member functions as it extends class A. Class C extends class B and implements the other two member functions of class A. Choose the correct option below.  
a) Program won’t run as all the methods are not defined by B  
b) Program won’t run as C is not inheriting A directly  
c) Program won’t run as multiple inheritance is used  
d) Program runs correctly  
Answer: d  
Explanation: The program runs correctly. This is because even class B is abstract so it’s not mandatory to define all the virtual functions. Class C is not abstract but all the virtual functions have been implemented in that class.

Inheritance:

1. Which of these keywords is used to define interfaces in Java?  
a) interface  
b) Interface  
c) intf  
d) Intf  
Answer: a

2. Which of these can be used to fully abstract a class from its implementation?  
a) Objects  
b) Packages  
c) Interfaces  
d) None of the Mentioned  
Answer: c

3. Which of these access specifiers can be used for an interface?  
a) Public  
b) Protected  
c) private  
d) All of the mentioned  
Answer: a  
Explanation: Access specifier of an interface is either public or no specifier. When no access specifier is used then default access specifier is used due to which interface is available only to other members of the package in which it is declared, when declared public it can be used by any code.

4. Which of these keywords is used by a class to use an interface defined previously?  
a) import  
b) Import  
c) implements  
d) Implements  
Answer: c  
Explanation: interface is inherited by a class using implements.

5. Which of the following is the correct way of implementing an interface salary by class manager?  
a) class manager extends salary {}  
b) class manager implements salary {}  
c) class manager imports salary {}  
d) none of the mentioned  
Answer: b

Collection :

1. Which statement is true for the class java.util.HashSet?  
a) The elements in the collection are ordered.  
b) The collection is guaranteed to be immutable.  
c) The elements in the collection are guaranteed to be unique.  
d) The elements in the collection are accessed using a unique key.  
Answer: c

2. Which of the following statements about the hashcode() method are incorrect?

1. The value returned by hashcode() is used in some collection classes to help locate objects.
2. The hashcode() method is required to return a positive int value.
3. The hashcode() method in the String class is the one inherited from Object.
4. Two new empty String objects will produce identical hashcodes.

a) 1 and 2  
b) 2 and 3  
c) 3 and 4  
d) 1 and 4  
Answer: b

3. Which of the following are true statements?

1. The Iterator interface declares only three methods: hasNext, next and remove.
2. The ListIterator interface extends both the List and Iterator interfaces.
3. The ListIterator interface provides forward and backward iteration capabilities.
4. The ListIterator interface provides the ability to modify the List during iteration.
5. The ListIterator interface provides the ability to determine its position in the List.

a) 2, 3, 4 and 5  
b) 1, 3, 4 and 5  
c) 3, 4 and 5  
d) 1, 2 and 3  
Answer: b

4. What will be the output of the program?

TreeSet map = new TreeSet();  
map.add("one");  
map.add("two");  
map.add("three");  
map.add("four");  
map.add("one");  
Iterator it = map.iterator();  
while (it.hasNext() ) {  
 System.out.print( it.next() + " " );  
}

a) one two three four  
b) four three two one  
c) four one three two  
d) one two three four one

Answer : c

5. What will be the output of the program?

import java.util.\*;   
class I {   
public static void main (String[] args) {  
 Object i = new ArrayList().iterator();   
 System.out.print((i instanceof List)+",");   
 System.out.print((i instanceof Iterator)+",");   
 System.out.print(i instanceof ListIterator);   
 }   
}

a) Prints: false, false, false  
b) Prints: false, false, true  
c) Prints: false, true, false  
d) Prints: false, true, true

Answer: c

6. What will be the output of the program?

public class Test {   
 public static void main (String args[]) {  
 String str = NULL;   
 System.out.println(str);   
 }   
}

a) NULL  
b) Compile Error  
c) Code runs but no output  
d) Runtime Exception

Answer: b

7. which statement is true?

class Test1 {  
 public int value;  
 public int hashCode() { return 42; }  
}  
class Test2 {  
 public int value;  
 public int hashcode() { return (int)(value^5); }  
}

a) class Test1 will not compile.  
b) The Test1 hashCode() method is more efficient than the Test2 hashCode() method.  
c) The Test1 hashCode() method is less efficient than the Test2 hashCode() method.  
d) class Test2 will not compile.

Answer: c

Exception:

1. When does Exceptions in Java arises in code sequence?  
a) Run Time  
b) Compilation Time  
c) Can Occur Any Time  
d) None of the mentioned  
Answer: a  
Explanation: Exceptions in Java are run-time errors.

2. Which of these keywords is not a part of exception handling?  
a) try  
b) finally  
c) thrown  
d) catch  
Answer: c  
Explanation: Exceptional handling is managed via 5 keywords – try, catch, throws, throw and finally.

3. Which of these keywords must be used to monitor for exceptions?  
a) try  
b) finally  
c) throw  
d) catch  
Answer: a

4. Which of these keywords must be used to handle the exception thrown by try block in some rational manner?  
a) try  
b) finally  
c) throw  
d) catch  
Answer: d  
Explanation: If an exception occurs within the try block, it is thrown and cached by catch block for processing.

5. Which of these keywords is used to manually throw an exception?  
a) try  
b) finally  
c) throw  
d) catch  
Answer: c

6) Which is the super class of all java exceptions classes?

a) Exception  
b) RuntimeException  
c) Throwable  
d) IOException

Answer: C

7) Direct subclass of Throwable in Java

a ) Exception  
b) Error  
c) Both A & B  
d) None

Answer: C

8) un-checked(runtime) exception in java is/are

a) ArrayIndexOutOfBoundsException  
b) ArithmeticException  
c) NullPointerException  
d)All

Answer: D  
All above mentioned exceptions are run time exceptions.

9)Incorrect statement(s) about finally block in java exception

a) Finally block always follow try catch block  
b) finally block always executes whether exception is handled or not.  
c) There can be multiple finally blocks followed by try catch block.  
d) All are correct

Answer: C  
In java exception handling, for each try block there can be zero or more catch blocks, but only one finally block.

10) True statement(s) about try catch block

a) It is mandatory to have catch block with every try block  
b) There must be only one catch block followed by try block  
c) There can be multiple catch block followed by try block.  
d) All

Answer: C

Lambda:

1. Given

interface Test {  
 public void print( );  
}  
Which are valid lambda expressions (select 2 options)?  
a) ->System.out.println(“Hello world”);  
b) void -> System.out.println(“Hello world”);  
c) ( ) -> System.out.println(“Hello world”);  
d) ( ) ->{ System.out.println(“Hello world”); return; }  
e) (void ) -> System.out.println(“Hello world”);

Answer: c,d

2. Which are true about the functional interface?  
a) It has exactly one method and it must be abstract.  
b) It has exactly one method and it may or may not be abstract.  
c) It must have exactly one abstract method and may have any number of default or static methods.  
d) It must have exactly one default method and may have any number of abstract or static methods.  
e) It must have exactly one static method and may have any number of default or abstract methods.

Answer: c

3. Which lambda can replace the MyTest class to return the same value? (Choose all that apply)  
interface Sample {  
 String change(int d);  
}  
class MyTest implements Sample {  
 public String change(int s) {  
 return "Hello";  
 }  
}

a) change((e) -> “Hello” )  
b) change((e) -> {“Hello” })  
c) change((e) -> { String e = “”; “Hello” });  
d) change((e) -> { String e = “”; return “Hello”; });  
e) change((e) -> { String e = “”; return “Hello” });  
f) change((e) -> { String f = “”; return “Hello”; });

Answer : a,f

Stream:

1. Which of these stream contains the classes which can work on character stream?  
a) InputStream  
b) OutputStream  
c) Character Stream  
d) All of the mentioned  
Answer: c  
Explanation: InputStream & OutputStream classes under byte stream they are not streams. Character Stream contains all the classes which can work with Unicode.

2. Which of these class is used to read characters in a file?  
a) FileReader  
b) FileWriter  
c) FileInputStream  
d) InputStreamReader  
Answer: a

3. Which of these method of FileReader class is used to read characters from a file?  
a) read()  
b) scanf()  
c) get()  
d) getInteger()  
Answer: a

I/O :

1. Which of these exception is thrown by close() and read() methods?  
a) IOException  
b) FileException  
c) FileNotFoundException  
d) FileInputOutputException

Answer: a

2. Which of these values is returned by read() method is end of file (EOF) is encountered?  
a) 0  
b) 1  
c) -1  
d) Null

Answer: c

Multithread:

1. Thread priority in Java is?  
a) Integer  
b) Float  
c) double  
d) long

Answer: a  
Explanation: Java assigns to each thread a priority that determines hoe that thread should be treated with respect to others. Thread priority is integers that specify relative priority of one thread to another.

2. What will happen if two thread of the same priority are called to be processed simultaneously?  
a) Anyone will be executed first lexographically  
b) Both of them will be executed simultaneously  
c) None of them will be executed  
d) It is dependent on the operating system

Answer: d  
Explanation: In cases where two or more thread with same priority are competing for CPU cycles, different operating system handle this situation differently. Some execute them in time sliced manner some depending on the thread they call

JUnit :

1. public class MyEvenOdd {  
     public boolean isEvenNumber(int number){  
 boolean result = false;  
 if(number%2 == 0){  
        result = true;  
 }  
 return result;  
 }  
}

Test method for this:  
@Test  
public void testEvenOddNumber(){  
 MyEvenOdd meo = new MyEvenOdd();  
 //enter right code here  
}

a) assertEquals("10 is a even number", true, meo.isEvenNumber(10));  
b) assertEquals("10 is a even number", false, meo.isEvenNumber(10));  
c) assertEquals("10 is a even number", true, meo.isEvenNumber(10))  
d) assertEquals("10 is a even number", meo.isEvenNumber(10),true);

Answer: a

2. public class Calculator {  
 public int add(int x, int y) {  
 return x+y;  
 }  
 public int sub(int x, int y) {  
 return x-y;  
 }  
}

Test class:

1 public class CalculatorTest {  
2 @Test  
3 public void testAdd() {  
4 Calculator c=new Calculator();  
5 *assertTrue*(5, c.add(2,3));  
6 }  
7

8 @Ignore  
9 public void testSub() {  
10 Calculator c=new Calculator();  
11 *assertEquals*(20, c.sub(100,80));  
12 }  
13 }

We want to check both the Add and Sub methods .Detect the lines where the Test class code is wrong.

Answer: 5,8

3. public int div(int x, int y) throws ArithmeticException{  
 return x/y;  
 }

Test method:

@Test  
 public void testDiv() {  
 Calculator c=new Calculator();  
 try{  
 *assertEquals*(5, c.div(100,20));   
 }catch(ArithmeticException e){  
 System.*out*.println("pass1"); *fail();* }   
 try{  
 *assertEquals*(10,c.div(100,0));  
 *fail();*  
 }catch(ArithmeticException e){System.*out*.println("pass2");}  
 }

What will be Console output ?

Answer : pass2