1. Care este rezultatul executiei codului urmator? (G5)

```java
abstract class Abstract {
    private int val;
    Abstract() { val = 10; }
    public void set(int val){
        this.val= val+getValue();
    }
    public abstract int getValue();
    public int get() { return val;}
}
class G5 extends Abstract {
    public int getValue() {
        return 1111;
    }
    public static void main(String[] args) {
        G5 obj = new G5();
        obj.set(11);
        System.out.println(obj.get());
    }}
```

a) eroare la compilare
b) 21
c) niciun răspuns corect
d) 1122

2. Ce afiseaza urmatorul program?

```java
class A {
    public int x = 0;
}
public class G10 {
    public A foo() {
        A a = new A();
        try { a.x = 1;
            throw new NullPointerException();
        } catch (Exception e) {
            a.x = 2;
            return a;
        } finally { a.x = 3; }
    }
    public static void main(String[] args) {
        G10 ex = new G10();
        System.out.println(ex.foo().x);
    }
}
```

a) 2
b) 3
c) se va arunca o exceptie la executie
d) niciun raspuns corect

3. Ce afiseaza urmatorul program? (G12)

```java
public class R12 {
    public static void main(String[] args) {
        Stream<String> ss = Stream.of("asd ","bus  ","aop ");
        var res = ss
                .filter(s -> {
                    System.out.print(s);
                    return s.contains("a");
                })
                .map((x) ->
                {
                    System.out.print(x);
                    return x.toUpperCase();
                })
                .reduce("", (x, y) -> x + y);
        System.out.println(res);
    }}
```

a) asd bus aop asd bus aop ASD AOP
b) asd asd bus  aop aop ASD AOP
c) ASD AOP
d) eroare

4. Ce afiseaza urmatorul program?

```java
class AA<E,T>{
    private E e;
    private T t;
    public void setValueE(E e){ this.e = e;}
    public void setValueT(T t){ this.t = t;}
    public E getValue(){ return e; }
    public T getValue1(){ return t; }
}
public class Test {
    public static void main(String[] args) {
        AA bb = new AA<Integer, String>();
        bb.setValueE(1010);  bb.setValueE("asfd");
        System.out.print(bb.getValue()+" "+
bb.getValue1());
    }
}
```

a) asfd null
b) 1010 null
c) 1010 asfd
d) eroare la compilare

5. Ce afiseaza urmatorul program?

```java
class Pizza {
    protected int id;
    public Pizza(int id) {this.id = id;}
    public Pizza() { }
    public boolean equals(Pizza obj) { return obj.id ==this.id;
    } }  //end Pizza class
class PizzaWithCheese extends Pizza {
    private String topping;
    public PizzaWithCheese(int id,String topping) {
        super(id);
        this.topping=topping;
    }
    public boolean equals(PizzaWithCheese obj) {
        return super.equals(obj) &&
                        this.topping.equals(obj.topping);
    }}
public class G6 {
    public static void main(String[] args) {
        PizzaWithCheese pizza1 =
                new PizzaWithCheese(1, "mozzarella");
        PizzaWithCheese pizza2 =
                new PizzaWithCheese(1, "feta");
        Pizza pizza3 = new PizzaWithCheese(1, "burduf");
        Pizza[] x={pizza1,pizza2};
        System.out.print(pizza1.equals(pizza2) +" ");
        System.out.print(x[0].equals(x[1]) +" ");
        System.out.print(pizza3.equals(pizza2) +" ");
    }
}
```

a) false true true   c) false false false

b) false true false  d) eroare la compilare

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6. Ce afiseaza urmatorul program?

```java
1    class Contact {
2        public  String Name = "Mapescu I ";
3        class Numar1 {
4            private String nr = "0987654321";
5            public String ContactNou() {
6                return Name + nr;
7            }
8        }
9        static class Numar2 {
10           private String nr = "0945654321";
11           public String ContactNou() {
12               return Name + nr;
13           }
14       }
15   }
16   public class G12 {
17       public static void main(String[] args) {
18           Contact c=new Contact();
19           Contact.Numar1 c1=c.new Numar1();
20           Contact.Numar2 c2=new Contact.Numar2();
21           System.out.println(c1.ContactNou());
22           System.out.println(c2.ContactNou());
23       }
24   }
```

a) eroare la compilare
in linia 12

c) Mapescu I 0987654321
  Mapescu I 0945654321

b) eroare la compilare
in linia19

d) eroare la executie

7. Ce afiseaza urmatorul program?

```java
class EmailSender {
    private String message;
    public EmailSender(String s) { message=s;}
    public String run() {
        System.out.print(message+" ");
        return "sent";
    }
}
public class G30 {
    static final Integer NTHREDS=5;
    public static void main(String[] args)
            throws InterruptedException {
        ExecutorService executor =
                        Executors.newFixedThreadPool(NTHREDS);
        List<Callable<String>> l=new ArrayList<>();
        for (int i = 0; i < 3; i++) {
            Callable<String> worker = new EmailSender("m"+i)::run;
            l.add(worker);
        }
        List<Future<String>> futures = executor.invokeAll(l);
        executor.shutdown();
    }
}
```

a) m1 m2 m0
sau o permutare a lor

b) se arunca exceptia
InterruptedException, la executie,
executorul fiind oprit fortat

c) m1 sent m2 sent m0 sent
sau o permutare a lor

d) eroare la compilare

## 8. Care este rezultatul executiei codului urmator?

```java
interface Formula {
    double calculate(double a);
}
class A implements Formula {
    static int var1 =100;
    double x=9;
    public double calculate(double a) {
        double x =A.this.var1*a;
        x++;
        Formula f = (double b) -> {
            return Math.abs(x);
        };
        return f.calculate(a);
    }
}
public class R11 {
    public static void main(String[] args) {
        System.out.printf("%.0f",new A().calculate(10));
    }
}
```

| a) 1001 | c) 1000 |
|---|---|
| b) eroare la compilare | d) niciun raspuns corect |

## 9. Care este rezultatul executiei codului urmator?

```java
class Student {
    String name;
    int varsta;
    Student(int v) { varsta = v; }
    Student(String n, int v) { name = n; varsta = v;}
    @Override public String toString() {
        return name+" "+varsta;
    }
}
public class G16 {
    public static void main(String[] args) {
        TreeSet<Integer> i = new TreeSet<Integer>();
        TreeSet<Student> s = new TreeSet<Student>(
                (x,y)->x.varsta-y.varsta
        );
        s.add(new Student("S",19));
        s.add(new Student("D",20));
        s.add(new Student("M",19));
        i.add(1); i.add(2); i.add(1);
        System.out.println(s+" "+i);
    }}
```

| a) eroare la compilare | c) [S 19, D 20] [1, 2] |
|---|---|
| b) eroare la executie | d) [S 19, M 19, D 20] [1, 2] |

---

## 10. Ce afiseaza urmatorul program?

```java
public class G226 {
    public static void main(String[] args) {
        Stream<String> ss = Stream.of("ee ","xe ","xe y ");
        var res = ss
                .filter(s -> {
                    System.out.print(s);
                    return s.contains("x");
                })
                .map((x) ->
                {
                    System.out.print(x);
                    return x.toUpperCase();
                })
                .reduce((x, y) -> x + y);
        res.ifPresent(System.out::print);
    }}
```

| a) ee xe xe y xe xe y XE XE Y | c) ee xe xe xe y xe y XE XE Y |
|---|---|
| b) niciun raspuns corect | d) ee xe xe xe y xe y |

## 11. Ce afiseaza urmatorul program?

```java
class AA<E,T>{
    private E e;
    private T t;
    public void setValueE(E e){ this.e = e;}
    public void setValueT(T t){ this.t = t;}
    public E getValue(){ return e; }
    public T getValue1(){ return t; }
}
public class Test {
    public static void main(String[] args) {
        AA bb = new AA<Integer, String>();
        bb.setValueE(1010);  bb.setValueE("xyzt");
        System.out.print(bb.getValue()+" "+
bb.getValue1());
    }
}
```

| a) xyzt null | c) niciun raspuns corect |
|---|---|
| b) 1010 xyzt | d) eroare la compilare |

---

12. Ce afiseaza urmatorul program?

```java
class Patrat{
    public int latimea;
    public Patrat(int l){
        latimea =l;}
}
class Dreptunghi extends Patrat{
    public int lungimea;
    public Dreptunghi(int l, int L) {
        super(2);lungimea=L;
    }
    public void zoomIn(int dx) {
        this(latimea+dx,lungimea+dx);
    }
    public int getArea() {
        return latimea *lungimea;
    }
}
public class G8 {
    public static void main(String[] args) {
        Dreptunghi d=new Dreptunghi(2,3);
        d.zoomIn(2);
        System.out.println(d.getArea());
    }
}
```

| | | | |
|---|---|---|---|
| a) 20 | c) niciun raspuns corect | a) nu se afiseaza nimic | c) Artist Artist |
| b) eroare la executie | d) 6 | b) Pictor Pictor | d) eroare la compilare |

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13. Ce afiseaza urmatorul program?

```java
class A {
    public int x = 0;
}
public class G10 {
    public A foo() {
        A a = new A();
        try { a.x = 1;
            throw new NullPointerException();
        } catch (Exception e) {
            a.x = 2;
            return a;
        } finally { a.x = 3; }
    }
    public static void main(String[] args) {
        G10 ex = new G10();
        System.out.println(ex.foo().x);
    }
}
```

| | |
|---|---|
| a) 2 | c) se va arunca o exceptie la executie |
| b) 3 | d) niciun raspuns corect |

14. Ce afiseaza urmatorul program?

```java
class EmailSender {
    private String message;
    public EmailSender(String s) { message=s;}
    public String run() {
        System.out.print(message+" ");
        return "done";
    }
}
public class G30 {
    public static void main(String[] args)
            throws InterruptedException {
        ExecutorService executor =
                        Executors.newFixedThreadPool(3);
        List<Callable<String>> l=new ArrayList<>();
        for (int i = 1; i < 3; i++) {
            Callable<String> worker = new
                            EmailSender("meeting"+i)::run;
            l.add(worker);
        }
        List<Future<String>> futures = executor.invokeAll(l);
        executor.shutdown();
    }
}
```

| | |
|---|---|
| a) "meeting1 meeting2" sau "meeting2 meeting" | b) niciun raspuns corect |
| c) "meeting1 done meeting2 done" sau "meeting2 done meeting1 done" | d) eroare la executie |