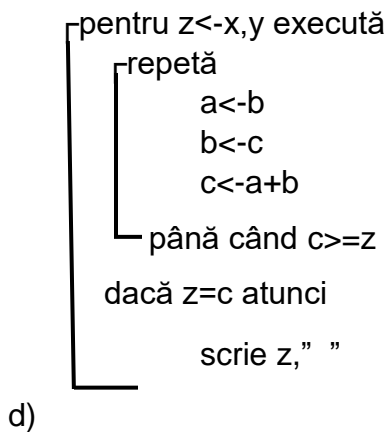


Examenul de bacalaureat național 2018  
Proba E. d) – Informatică - Limbajul C/C++

MODEL Rezolvare

SUBIECTUL I

1. a
2.
  - a) 3 5 8
  - b) 21 33
  - c) citește x,y (numere naturale,  $x \leq y$ )  
 $b < -0$   $c < -1$



```
#include <iostream>
using namespace std;
int x,y,z,a,b,c;
int main()
{
    cout<<"x="; cin>>x;
    cout<<"y="; cin>>y;
    b=0; c=1;
    for (z=x; z<=y; z++)
    {
        while (c<z)
        {
            a=b;
            b=c;
            c=a+b;
        }
        if (z==c)
            cout<<z<<" ";
    }
    return 0;
}
```

SUBIECTUL II

1. c
2. d
- 3.

```
struct data_c
{
    int luna;
    int an;
};
struct masina
{
    data_c data;
    char marca[21];
};m;
```

- 4.

```
#include <iostream>
#include <cstring>
using namespace std;
char s[21],x[21];
int n, k,i;
int main()
{
    cin.get(s,21);
    n=strlen(s);
    k=n/2;
    if (n%2==0)
        strcpy(x,s);
    else
    {
        strcpy(s+k,s+k+1);
        strcpy(x,s);
    }
    cout<<x;
    return 0;
}
```

5.

```
#include <iostream>
using namespace std;
int i,j,n,a[50][50];
int main()
{
    cout<<"n="; cin>>n;
    for (i=1;i<=n;i++)
    {
        for (j=1;j<=n;j++)
        {
            if ((i+j)>=n)&&(i+j<=n+2))
                a[i][j]=1;
            else
                a[i][j]=2;
        }
    }
    for (i=1;i<=n;i++)
    {
        for (j=1;j<=n;j++)
        {
            cout<<a[i][j]<<" ";
        }
        cout<<endl;
    }
    return 0;
}
```

### Subiectul III

1. c
2. (trova, fado, doină, baladă, romanță)  
(trova, fado, doină, romanță, baladă)
- 3.

```
void divizori(int n, int x, int y, int z)
{
    for (x=1; x<n/2; x++)
        if (n%x==0)
        {
            for (y=x+1;n-x>2*y; y++)
                if ((n%y==0) && (n%(n-x-y)==0))
                {
                    z=n-x-y;
                    return;
                }
        }
    x = 0; y = 0; z = 0;
}
```

4.

```
#include <iostream>
#include <fstream>
using namespace std;
ifstream f("bac.txt");
int v[100],x, i,ok;
int main()
{
    for (i=0; i<100; i++)
        v[i] = 0;
    while (f>>x)
    {
        while (x>9)
        {
            v[x%100]++;
            x=x/10;
        }
    }
    ok=0;
    for (i=10; i<100; i++)
        if (v[i]==1)
        {
            ok=1;
            cout<<i<<" ";
        }
    if (ok==0)
        cout << "Nu exista";
    return 0;
}
```