



**Examen - 10 de Febrero de 2005**

**1ª parte**

30 pts

	1	2	3	4	5	6	7	8	9	10
<b>CC 1</b>	<b>a</b>	<b>c</b>	<b>b</b>	<b>a</b>	<b>b</b>	<b>b</b>	<b>c</b>	<b>c</b>	<b>d</b>	<b>b</b>

**2ª parte**

<b>Problema 1</b>	20 pts	
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```
function y = BorrarDupCons(a)

largo = length(a);
if largo > 0
    i = 1;
    car_actual = a(1);
    sin_repetidos = [car_actual];
    for i=1:largo
        car_nuevo = a(i);
        if car_actual ~= car_nuevo
            sin_repetidos = [sin_repetidos a(i)];
            car_actual=car_nuevo;
        end
    end
end
y = sin_repetidos;
```

<b>Problema 2</b>	25 pts	
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```
function y = Maximo(a)

largo = length(a);
y = 0;
if largo > 0
    a = ordenar(a);
    i = 2;
    car_actual = a(1);
    max_cant = 0;
    max_valor = a(1);
    cont = 1;
    for i=1:largo
        car_nuevo = a(i);
        if car_actual == car_nuevo
            cont = cont+1;
        else
            if (max_cant < cont)
                max_cant = cont;
                max_valor = car_actual;
            end
            cont = 1;
            car_actual=car_nuevo;
        end
    end
    if max_cant < cont
        max_valor = car_actual;
    end
end
```



```
y = max_valor;  
end
```

```
function v = Ordenar (v)  
for n=1:length(v)-1  
    for s=n+1:length(v)  
        if v(n) > v(s)  
            temp = v(n);  
            v(n) = v(s);  
            v(s) = temp;  
        end  
    end  
end
```

<b>Problema 3</b>	25 pts (15, 10)	
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```
function y = Intercalar(a,b)  
if isempty(a)  
    y = b;  
elseif isempty(b)  
    y = a;  
else  
    if a(1) > b(1)  
        y = [b(1) Intercalar(a, b(2:length(b)))];  
    else  
        y = [a(1) Intercalar(a(2:length(a)), b)];  
    end  
end
```

```
function y = MergeSort(a)  
if isempty(a)  
    y = a;  
elseif length(a)==1  
    y = a;  
else  
    mitad1 = mergeSort(a(1:floor(length(a)/2)));  
    mitad2 = mergeSort(a(floor(length(a)/2)+1:length(a)));  
    y = Intercalar (mitad1,mitad2);  
end
```