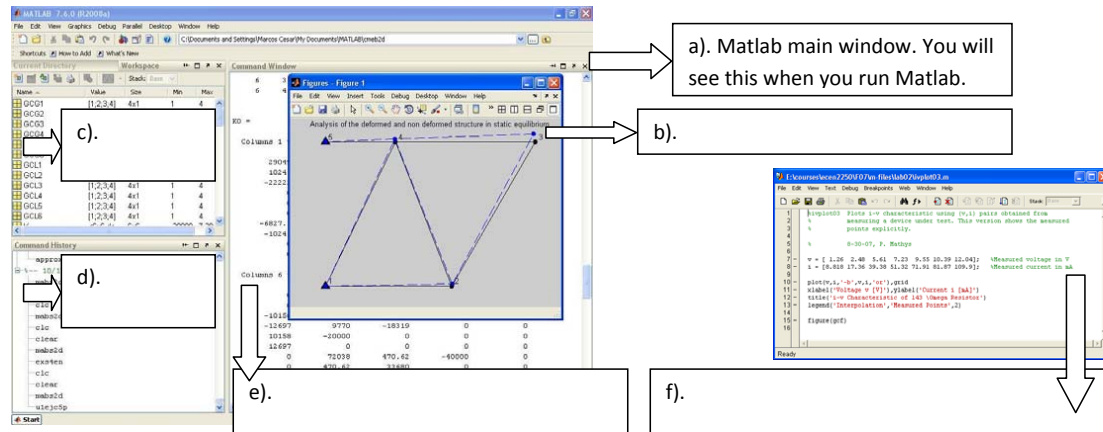


Name:  
Corrector:

1. Identify each of the matlab windows and briefly describe them (no more than one sentence, if any needed.)



2. Taking into account the following code

```
myMatrix = unidrnd(10,[2 2]);  
% hint:  
% R = unidrnd(N)  
% R = unidrnd(N,m,n,...)  
% R = unidrnd(N,[m,n,...])  
% R = unidrnd(N) generates random numbers for the discrete  
% uniform distribution with maximum N.
```

Answer the following questions:

- What appears in the console?
- What = sign does?
- What % sign does?
- What ; sign does?
- Which is the answer of executing *whos* at this point?
- Give a possible answer of executing *display (myMatrix)*;

3. Which is the difference in the following codes:

(a)	(b)	(c)
<code>a = [1 2; 3 4];</code>	<code>a = [ 1 2 3 4 ];</code>	<code>a = [ 1 2 ... 3 4 ];</code>

4. Give the console output of the following statements. If some statement produce an error, explain why.

```
[X Y] = meshgrid(1:3);
myMatrix = 10*X+Y
myMatrix(:)
fliplr(myMatrix)
reshape(myMatrix(:),2,[]) %this might produce an error
reshape([myMatrix(:); 0],2,[])
% hint:
% X =
%
%      1      2      3
%      1      2      3
%      1      2      3
%
%
% Y =
%
%      1      1      1
%      2      2      2
%      3      3      3
```

5. Taking into account the previous matrix (`myMatrix`) which of the following indexations is correct and outputs the four corners of the previous matrix as:

`ans =`

```
11    31
13    33
```

- (a) `myMatrix ([1,end], [1,end])`
- (b) `myMatrix ([1,1], [end,end])`
- (c) `myMatrix ([1,1], [1,end], [end,1], [end,end])`
- (d) `myMatrix (1:end, 1:end)`

6. What is the command *guide* for?

7. Which effect has the following code:

```
f=figure();
setappdata(f,'myVariable',pi);
```

8. Taking into account the following code:

```
C = {1:2:10, linspace(1,10,10), rand(5,5)};
cellfun(@(x) mean(x),C,'UniformOutput',false)
cellfun(@(x) length(mean(x)),C,'UniformOutput',false)
```

- (a) Do you know all the elements in this code?
- (b) What is it doing?
- (c) Which is the answer for the third statement?
- (d) Which of the previous code lines is equivalent to the following one?  
`arrayfun(@(x) mean(C{x}),1:3,'UniformOutput',false)`

9. Can you define the so called *matlab code vectorization* and its relation with *for* and *while* loops ?

10. What does the statement "*dbstop if error*" once executed on the console? Which is its effect on posterior executions? How is deactivated?

11. Name some matlab functions in order to get help from the system.

12. Which command will delete (completely remove) the last cell of a cell-array C?

- (a) `C{end} = [];`
- (b) `C[end] = [];`
- (c) `C(end) = [];`
- (d) `C{end} = {[]};`

13. Why `ans` is 0 ? Which is the purpose of the dot in front of the power operator?

```
>> A = rand(5,5);  
>> isequal( A^2, A.^2 )  
ans =  
  
0
```

14. Which is the difference between an Script and a function ?

15. What's wrong?

```
>> I=imread('board.tif'); out = imwrite(I,'myName.png')  
Error using imwrite  
Too many output arguments.
```