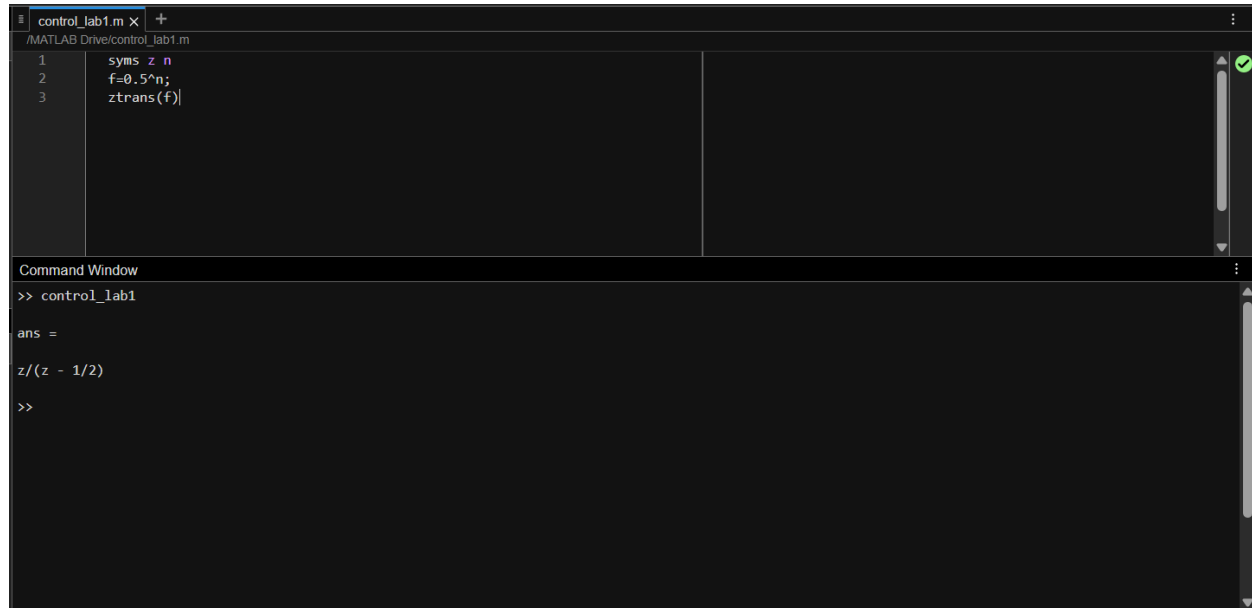


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قسم : حاسبات

Q1.1



The image shows the MATLAB environment. The Editor window displays a script named `control_lab1.m` with the following code:

```
1 syms z n
2 f=0.5^n;
3 ztrans(f)
```

The Command Window shows the execution of the script:

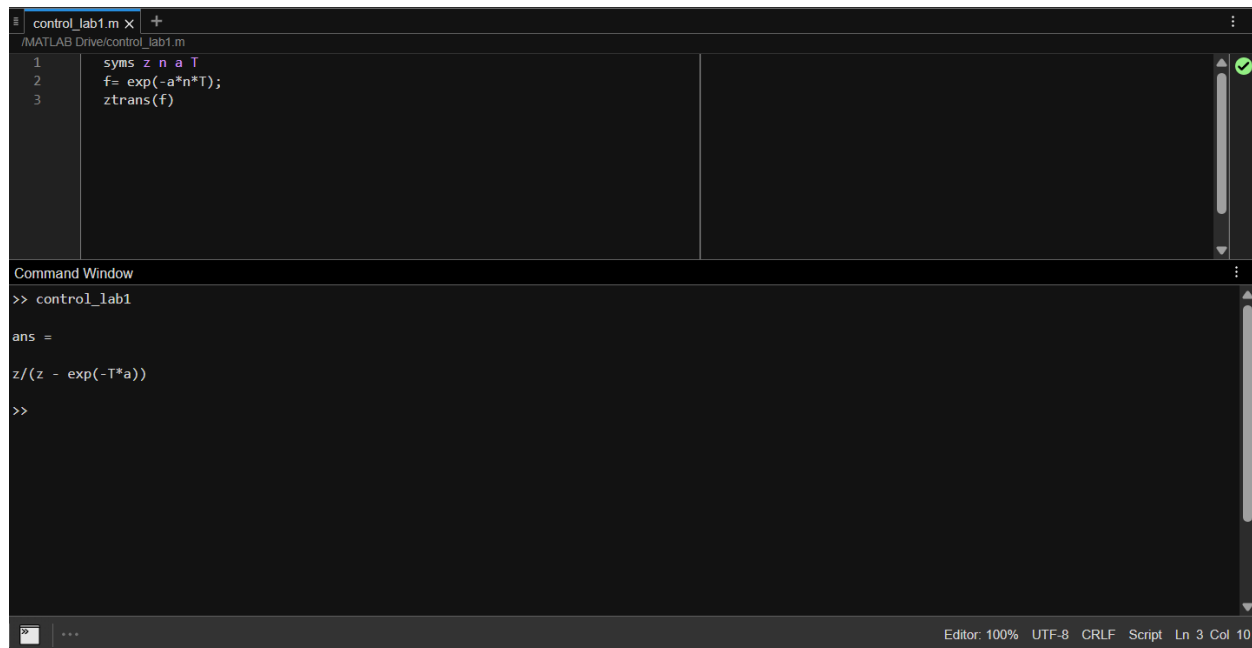
```
>> control_lab1

ans =

z/(z - 1/2)

>>
```

Q1.2



The image shows the MATLAB environment. The Editor window displays a script named `control_lab1.m` with the following code:

```
1 syms z n a T
2 f= exp(-a*n*T);
3 ztrans(f)
```

The Command Window shows the execution of the script:

```
>> control_lab1

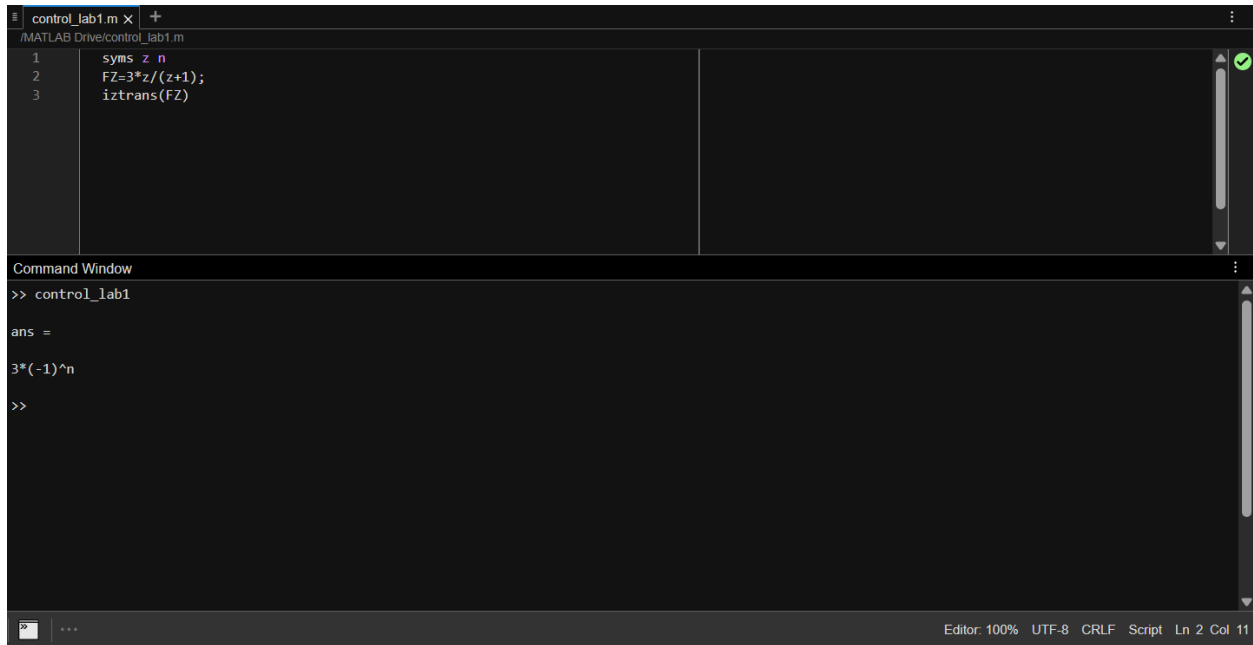
ans =

z/(z - exp(-T*a))

>>
```

The status bar at the bottom indicates: Editor: 100% UTF-8 CRLF Script Ln 3 Col 10

Q2.1



The image shows a MATLAB editor window with a script named `control_lab1.m`. The script contains three lines of code: `syms z n`, `FZ=3*z/(z+1);`, and `iztrans(FZ)`. The Command Window shows the output of running the script: `>> control_lab1` followed by `ans =` and `3*(-1)^n`. The status bar at the bottom indicates the editor is at 100% zoom, UTF-8 encoding, CRLF line endings, and the script is at line 2, column 11.

```
control_lab1.m x +
/MATLAB Drive/control_lab1.m
1 syms z n
2 FZ=3*z/(z+1);
3 iztrans(FZ)

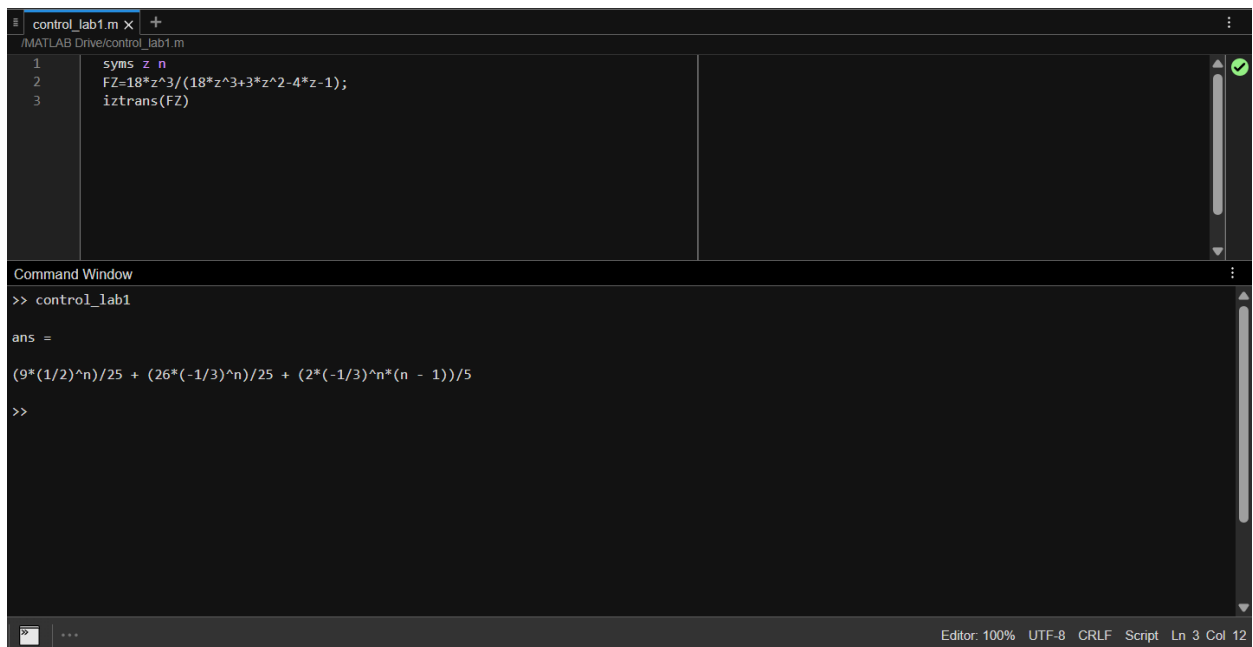
Command Window
>> control_lab1

ans =

3*(-1)^n
>>

Editor: 100% UTF-8 CRLF Script Ln 2 Col 11
```

Q2.2



The image shows a MATLAB editor window with a script named `control_lab1.m`. The script contains three lines of code: `syms z n`, `FZ=18*z^3/(18*z^3+3*z^2-4*z-1);`, and `iztrans(FZ)`. The Command Window shows the output of running the script: `>> control_lab1` followed by `ans =` and the expression `(9*(1/2)^n)/25 + (26*(-1/3)^n)/25 + (2*(-1/3)^n*(n - 1))/5`. The status bar at the bottom indicates the editor is at 100% zoom, UTF-8 encoding, CRLF line endings, and the script is at line 3, column 12.

```
control_lab1.m x +
/MATLAB Drive/control_lab1.m
1 syms z n
2 FZ=18*z^3/(18*z^3+3*z^2-4*z-1);
3 iztrans(FZ)

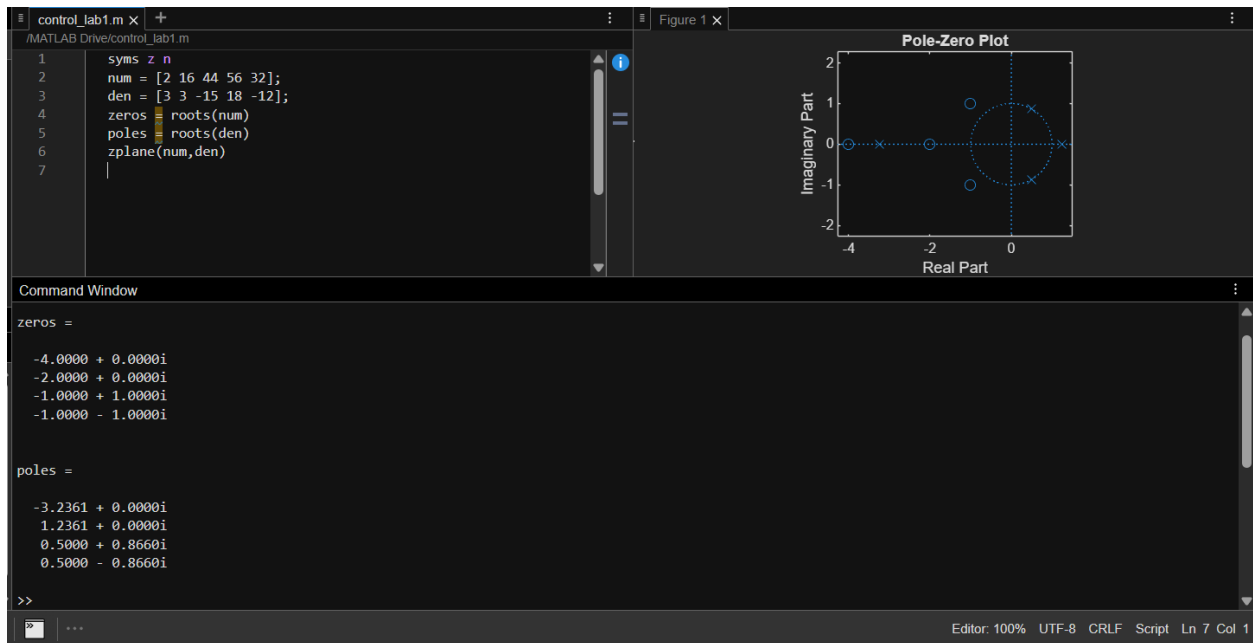
Command Window
>> control_lab1

ans =

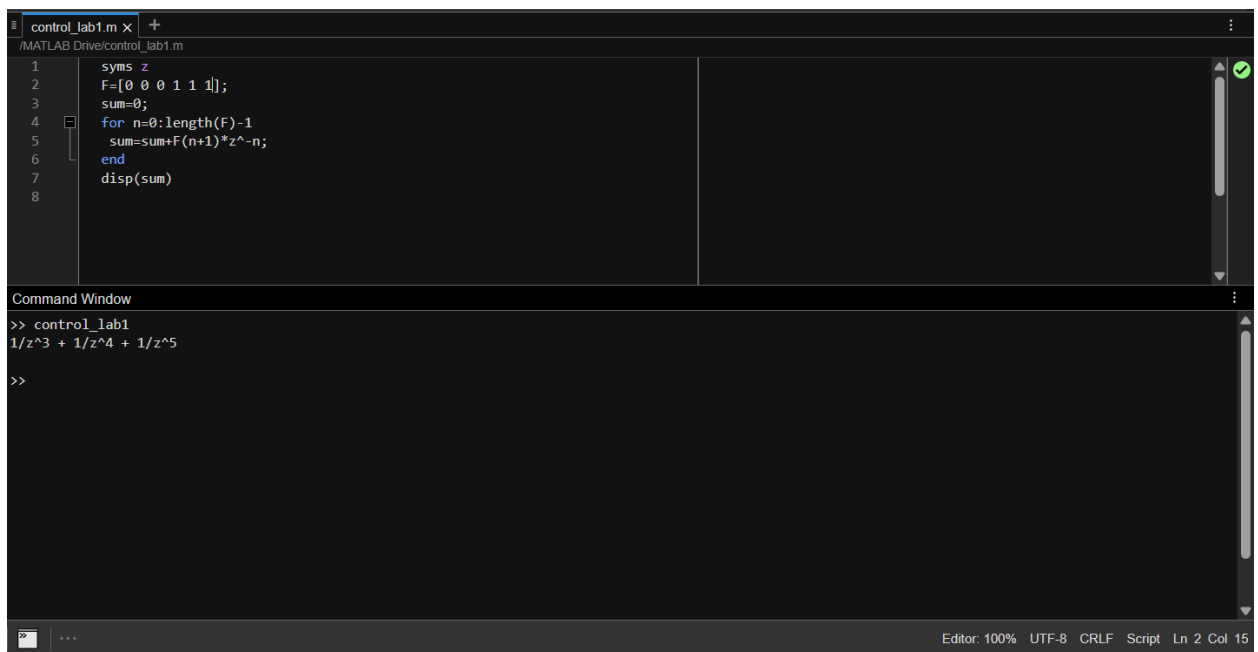
(9*(1/2)^n)/25 + (26*(-1/3)^n)/25 + (2*(-1/3)^n*(n - 1))/5
>>

Editor: 100% UTF-8 CRLF Script Ln 3 Col 12
```

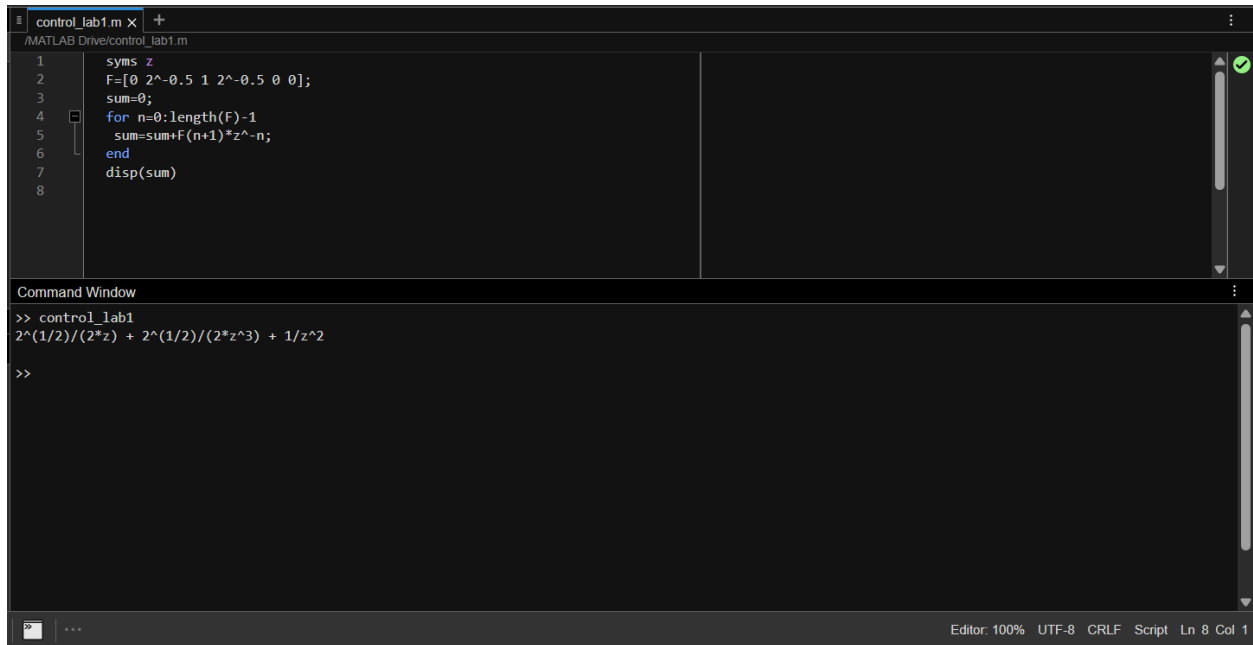
Q.3



Q4.1



Q4.2



The image shows a MATLAB development environment with two main windows: the Editor and the Command Window.

Editor Window: The title bar shows 'control_lab1.m X'. The file path is '/MATLAB Drive/control_lab1.m'. The script contains the following code:

```
1 syms z
2 F=[0 2^-0.5 1 2^-0.5 0 0];
3 sum=0;
4 for n=0:length(F)-1
5     sum=sum+F(n+1)*z^-n;
6 end
7 disp(sum)
8
```

Command Window: The title bar shows 'Command Window'. The command prompt shows the execution of the script:

```
>> control_lab1
2^(1/2)/(2*z) + 2^(1/2)/(2*z^3) + 1/z^2
>>
```

The status bar at the bottom indicates 'Editor: 100% UTF-8 CRLF Script Ln 8 Col 1'.