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Matric no.:16/ENG05/007

COURSE:ENG 281

Question 1
commandwindow

clear

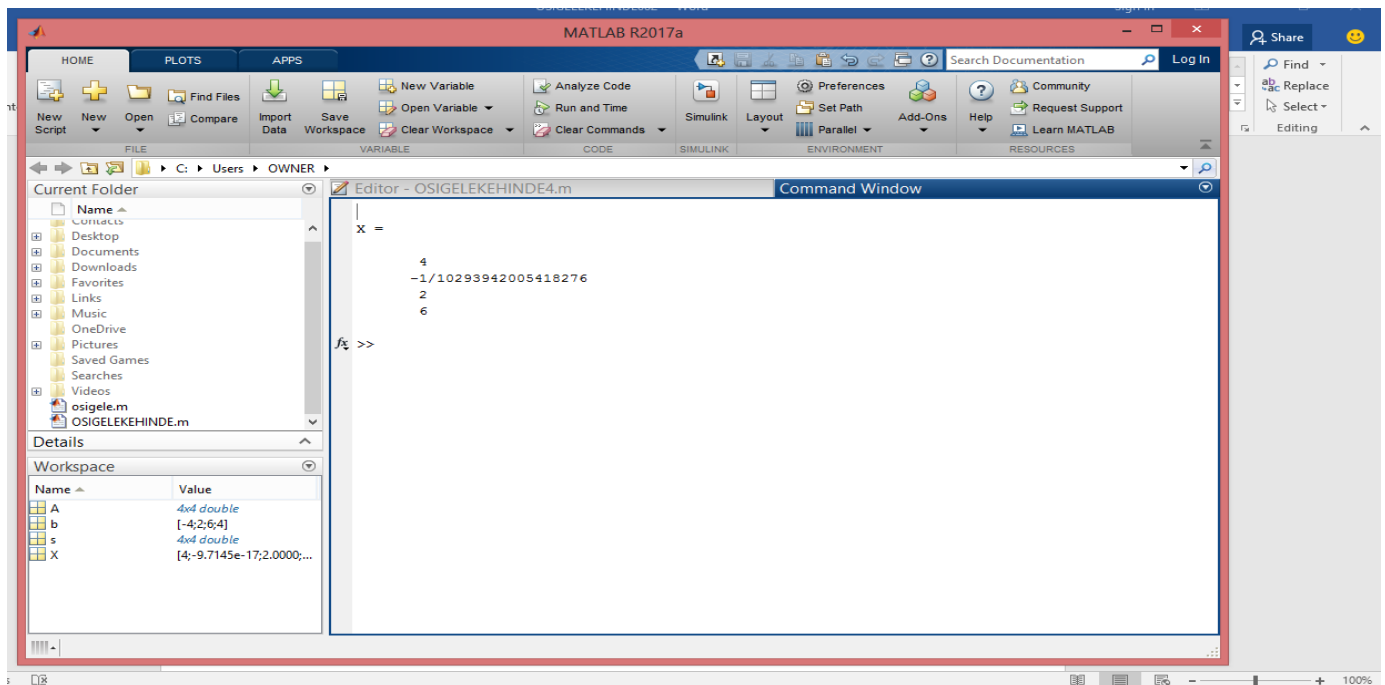
clc

A=[0,10,4,-2; -3,-17,1,2; 1,1,1,0; 8,-34,16,-10];

s=inv(A);

b=[-4; 2; 6; 4];

X=i*b



QUESTION 2

commandwindow

clear

clc

syms t

```
d=1.5*exp(-0.75*t)*sin(0.85*t)+0.37*t
```

```
tn=[0:0.01:2.5];
```

```
dn=subs(d,tn);
```

```
figure(1);
```

```
plot(tn,dn)
```

```
xlabel('time(min)');
```

```
ylabel('difference(km)');
```

```
axis tight
```

```
grid on
```

```
grid minor
```

```
figure(2)
```

```
v=diff(d);
```

```
vn=subs(v,tn);
```

```
plot(tn,vn);
```

```
xlabel('time(min)');
```

```
ylabel('velocity(km/min)');
```

```
grid on
```

```
grid minor
```

```
axis tight
```

```
a=diff(v);
```

```
an=subs(a,vn);
```

```
figure(3)
```

```
plot(tn,an);
```

```
xlabel('time(min)');
```

```
ylabel('acceleration(km/min)');
```

```
grid on
```

```
grid minor
```

```
axis tight
```

MATLAB R2017a

HOME PLOTS APPS EDITOR PUBLISH VIEW

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FILE NAVIGATE EDIT BREAKPOINTS RUN

C:\Program Files\MATLAB\R2017a\bin

Current Folder

Workspace

Name	Value
a	1x1 sym
an	1x251 sym
d	1x1 sym
dn	1x251 sym
t	1x1 sym
tn	1x251 double
v	1x1 sym
vn	1x251 sym

Editor - C:\Users\OWNER\Documents\MATLAB\TEST2.m

```

1  commandwindow
2  clear
3  clc
4  syms t
5  d=1.5*exp(-0.75*t)*sin(0.85*t)+0.37*t
6  tn=[0:0.01:2.5];
7  dn=subs(d,tn);
8  figure(1);
9  plot(tn,dn);
10 xlabel('time (min)');
11 ylabel('difference (km)');
12 axis tight
13 grid on
14 grid minor
15 figure(2);
16 v=diff(d);
17 vn=subs(v,tn);
18 plot(tn,vn);
19 xlabel('time (min)');
20 ylabel('velocity (km/min)');
21 grid on
22 grid minor
23 axis tight
24 a=diff(v);
25 an=subs(a,vn);
26 figure(3);
27 plot(tn,an);
28 xlabel('time (min)');
29 ylabel('acceleration (km/min^2)');

```

Command Window

```

d =
(37*t)/100 + (3*sin((17*t)/20)*exp(-3*t/4))/2
fx >>

```

TEST2_Conv - Word

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Calibri (Body) 11 A Aa

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Figure 1

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difference(km)

time(min)

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