

MECE 101 MIDTERM

Name:

Surname:

Number:

Signature:

Q1) What will be the value of 'a', 'x' and 'count' after the MATLAB code below is executed? (30 points)

```
x=10;
a=15;
count=1;
while x>=5 | a>=5,
    count=count+1;
    if mod(a,count)==0,
        a=a-5;
    elseif mod(a,count)==1,
        x=x-5;
    else
        a=a-5;
        x=x-5;
    end
end
end
```

while-1
count=2
x=5 (4)

while-2
count=3
a=10 (4)

while-3
count=4
a=5 (4)
x=0

grid is 10

while-4
count=5
a=0 (4)

end-of-while (4)

result
x=0
a=0
count=5

Q2) What will be the value of 'a', 'k', 'm' and 'count' after the MATLAB code below is executed? (30 points)

```
a=3;
k=1;
m=1;
count=0;
while a<=15 & a>=2,
    count=count+1;
    a=a/k;
    if m==1
        for i=1:2,
            a=a+i;
        end
        m=2;
    else
        for i=1:4,
            k=k+1;
        end
        m=1;
    end
end
end
```

while-1
count=1
a=3
i=1 a=4
i=2 a=6
m=2 (4)

while-2
count=2
a=6
i=1 k=2
i=2 k=3
i=3 k=4
i=4 k=5
m=1 (4)

while-3
count=3
a=1.2
i=1 a=2.2
i=2 a=4.2
m=2 (4)

grid is 10

while-4
count=4
a=0.84
i=1 k=0
i=2 k=1
i=3 k=2
i=4 k=3
m=1 (4)

end-of-while (4)
result
a=0.84
count=4
k=4
m=1

Q3) There is a mistake in the code below: Find the mistake and correct it. (14 points)

```
a=1;
b=2;
if a*b=2
    c=5;
else
    c=6;
end
```



if a*b==2

(correction)

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Q4) What is the value of 'c' after the code is executed (13 points)

```
x=1;
y=2
if x<y
    c=5;
else
    c=6;
end
```

c=5

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Q5) What is the value of 'c' after the code is executed (13 points)

```
x=1;
y=1
if x<y
    c=5;
elseif x>y
    c=6;
else
    c=7;
end
```

c=7

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