

To pass the test you must answer correctly to at least 8 of the following 10 questions.  
Time: 30 minutes.

Name: \_\_\_\_\_

1. Which message is displayed after the following sequence of commands?

```
>>x= 0.75;
>>A = rand(5,1)
A =

    0.4218
    0.9157
    0.7922
    0.9595
    0.6557

>> if A > x
    disp('Message 1')
elseif A < limit
    disp('Message 2')
else
    disp('Message 3')
end
```

2. What does the following function do? (assume that the input argument is an array).

```
function y=foo(x)
n=1;
y=x(n);
while n<=length(x)-1
if y>x(n+1)
y=x(n+1);
end
n=n+1;
end
```

ANSWER:

3. Given a 5x2 table:

```
tbl=[z w]
```

what does the following command do (select ALL that apply)?

```
>>mdl = fitlm(tbl,'quadratic')
```

- creates a LinearModel object, visible in the workspace, representing a least-squares fit of the response to the data
  - creates a LinearModel object, not visible in the workspace, representing a least-squares fit of the response to the data
  - creates a QuadraticModel object representing a least-squares fit of the response to the data
  - creates a LinearModel object, which includes both properties (such as coefficients and residuals of the fit) and methods (which are functions that you can perform on the fit)
  - None of the above
4. What is the result of the following commands?

```
>>A=[7 14 7 102 28 7]  
>>x=A  
>>for i=min(A):max(A)  
x=A(i)  
end
```

what is the result?

- An error message
- 

x =

```
7    7    7   14   28   102
```

c.

x =

```
7   14    7  102   28    7
```

d.

x =

```
7   102
```

- None of the above

5. What is the value of n after the following while-loop is executed?

```
>>x=5  
>>n=10  
>>while x>1  
x=x-2  
n=n+1  
end
```

n=

6. What is the value of b after the following commands?

```
>>b=10
>>v=randi(20,20,1)
>>n=100
>>if (n>=length(v))
b=b+5
end
```

b=

7. Which of the following statements is true (select ALL that apply)?
- Removing syntax errors from the code does not mean that the code is error free
  - A green box indicates that there are neither syntax nor run time errors
  - MATLAB Code Analyzer cannot identify syntax errors before you run the program
  - Run-Time Errors can be corrected through a debug mode
  - None of the above
8. What is the result after the following commands are typed into MATLAB?

```
>>a=0
>>v=ones(20,1)
>>if v(1)<0
a=a+10
else
a=5
end
```

a=

9. If the value stored into the variable 'color' is 'rose', what will be displayed by the following code?

```
switch (color)
case {'red', 'light red', 'rose'}
disp('color is red')

case 'blue'
disp('color is blue')

case 'white'
disp('color is white')

otherwise
disp('Unknown color.')
end
```

ANSWER:

10. Write a function `scalarprod` that computes the scalar product of two vectors of the same dimension  $u$  and  $v$ , by using a for loop. Complete the function below:

```
function z=scalarprod(u,v)
```