

CODING FOR FINANCIAL APPLICATIONS QUIZ 3 NOVEMBER 13TH, 2019

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

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

1. What is the effect of the following command?

```
>> t = datetime(2007, [2;3;7;10;12], 1)
```

a.

```
>> t =  
02-Jan-2007  
03-Jan-2007  
07-Jan-2007  
10-Jan-2007  
12-Jan-2007
```

b.

```
>> t =  
01-Feb-2007  
01-Mar-2007  
01-Jul-2007  
01-Oct-2007  
01-Dec-2007
```

c.

```
>> t =  
02-Feb-2007  
03-Mar-2007  
07-Jul-2007  
10-Oct-2007  
12-Dec-2007
```

d. None of the above

2. Let

```
>> t1 = datetime(2005,10,21);  
>> t2 = datetime(2008,6,23);
```

What is the effect of the following command?

```
>> t = t1:7:t2
```

a.

```
>> t = 21-Oct-2005 22-Oct-2005 ... 22-Jun-2008 23-Jun-2008
```

b.

```
>> t = 21-Oct-2005 28-Oct-2005... 13-Jun-2008 20-Jun-2008
```

c.

```
>> t = 1x0 empty datetime array
```

d.

```
>> t = 1x0 empty double array
```

e. none of the above

3. Create a 1-by-4 row vector named d of type datetime representing the dates January 1st-4th, 1975.

```
>> d =
```

4. Create a 12-by-1 vector d of type datetime containing the first day of each month in the year 1990.

```
>> d =
```

5. What is the effect of the following command?

```
t=minutes(0:10:60)
```

- a. It creates a 1-by-7 minutes array
- b. It creates a 1-by-7 double array
- c. It produces an error message
- d. It creates a 1-by-7 duration array
- e. none of the above

6. (select all that apply) Which of the following expressions interchanges the second and third columns of the matrix

```
A =
```

```
6     3     2     1
9     8     1     9
5     6     7     2
4     5     4     7
```

transforming A into

```
A =
```

```
6     2     3     1
9     1     8     9
5     7     6     2
4     4     5     7
```

a.

```
A= A(:, [1 3 2 4])
```

b.

```
A(:, [2 3]) = A(:, [3 2]);
```

c.

```
A(:, [length(A(1,:)):-1:1])
```

d. None of the above

7. Given the matrix A

```
A =  
    1    5    5    4  
    1    3    2    3  
    4    2    4    2  
    1    4    4    5
```

what is the outcome of the following command?

```
>> A=sum(A,1)
```

a.

```
A =  
    2    6    6    5  
    2    4    3    4  
    5    3    5    3  
    2    5    5    6
```

b.

```
A = 15    9    12    14
```

c.

```
A =  
    7    14    15    14
```

d.

```
A =  
    7  
   14  
   15  
   14
```

e.

```
A =  
   15  
    9  
   12  
   14
```

f. None of the above

8. What are a,b, and c after the following commands?

```
>> v1=(1:6);v2=(4:10);[a,b,c]=intersect(v1,v2)
```

a =

b =

c =

9. Cody Problem 838. Check if number exists in vector.

Write the function `existsInVector` that returns 1 if number a exists in vector b otherwise returns 0, as in the following EXAMPLE

```
a = 3;  
b = [1,2,4];  
Returns 0.
```

```
a = 3;  
b = [1,2,3];  
Returns 1.
```

```
function y = existsInVector(a,b)
```

end

10. Cody Problem 649. Return the first and last character of a string

Return the first and last character of a string, concatenated together. If there is only one character in the string, the function should give that character back twice since it is both the first and last character of the string.

Example:

```
stringfirstandlast('boring example') = 'be'
```

```
function y = stringfirstandlast(x)
```

end