الفرقة الثالثة ـ شعبة الكيمياء

لائحة قديمة

كلية العلوم

الفصل الدراسى الاول 2015 -2016 م

تاريخ الامتحان: 30 / 12 / 2015

نموذج اجابة ـنصف ورقة

المــــــادة: حاسب الي

اسم استاذ المادة: الدكتور/ عبدالحميد محمد عبدالحميد ـ

جامعة بنها ـ كلية العلوم ـ قسم الرياضيات

Department of Mathematics Final Exam- Third Year Time: 1 Hour

Fac. of Science, Benha Univ. COMPUTER SCIENCE 30 December 2015

Please answer all the following questions. Total Marks = 40 points:-

(1) Given the arrays

x = [0 -1 5 -3 -6 7] and A = [-1 0 3 -4;-2 0 -1 1;-4 5 2 9;-2 7 -6 10].
What is the result of the following statements?

1) A(1,:)./A(4,:)   2) A(:,1:2:4)   3) y = x(end:-2:2)

4) A(3,:) = []   5) diag(A)   6) A.^2

7) size(A)   8) sum([x,0,3])   9) length(x)

10) mean(x)   11) [d,n]=max(A(:))   12) [A(2,:); x(1:4)]

13) A(:,2) + [1 0 -1 2]' 14) A+3*eye(4)   15) who

16) whos   17) min(x)   18) z = sort(x,'descend')

19) any(x)   20) S = (x(1:4)>-2)&(A(3,:)<1)   [20 Marks]

(2) a) Given t = 351/7, complete the following sentences:

1) >> format short,   t = ...,   2) >> format long, t = ...

3) >> format short g, t = ...,   4) >> format bank, t = ...

5) >> floor(t) = ...,   6) >> round(t) = ...

7) >> ceil(t) = ...,   8) >> rem(fix(t),2) = ...

b) What are the values of z after executing the following segment code?

```
y = 0.4:0.4:2
for i=1:length(y)
    if  y(i) > 1
       z(i) = y(i) + 2;
    else
       z(i) = y(i) - 2;
    end
end                                                    [20 Marks]
```

With My Best Wishes.

(1)

x = [0 -1 5 -3 -6 7] and A = [-1 0 3 -4;-2 0 -1 1;-4 5 2 9;-2 7 -6 10].

1) A(1,:)./A(4,:)
ans =

       0.5   0   -0.5   -0.4

2) A(:,1:2:4)
ans =
    -1   3
    -2   -1
    -4   2
    -2   -6

3) y = x(end:-2:2)
y =
     7   -3   -1

4) A(3,:) = []
A =
    -1   0   3   -4
    -2   0   -1   1
    -2   7   -6   10

5) diag(A)
ans =
     -1
      0
      2
     10

```
6) A.^2
ans =
       1      0      9     16
       4      0      1      1
      16     25      4     81
       4     49     36    100


7) size(A)
ans =
       4      4


8) sum([x,0,3])
ans =
       5


9) length(x)
ans =
       6


10) mean(x)
ans =
      0.3333


11) [d,n]=max(A(:))
d =
      10
n =
      16


12) [A(2,:); x(1:4)]
ans =
      -2      0     -1      1
       0     -1      5     -3
```

```
13) A(:,2) + [1 0 -1 2]'
ans =

     1
     0
     4
     9


14) A+3*eye(4)
ans =

     2     0     3    -4
    -2     3    -1     1
    -4     5     5     9
    -2     7    -6    13


15) who
Your variables are:
       x    A


16) whos
Name        Size         Bytes         Class
 A          4x4           128          double
 x          1x6            48          double


17)  min(x)
ans =

    -6


18) z = sort(x,'descend')
z =

     7     5     0    -1    -3    -6


19) any(x)
ans =

     1
```

20) S = (x(1:4)>-2)&(A(3,:)<1)
S =
   1   0   0   0

(2)
(a)

1) >> format short,   t = 50.1429
2) >> format long,   t = 50.142857142857146
3) >> format short g, t = 50.143
4) >> format bank,   t = 50.14
5) >> floor(t) = 50
6) >> round(t) = 50
7) >> ceil(t) = 51
8) >> rem(fix(t),2) = 0

(b)

y =
    0.4   0.8   1.2   1.6   2.0

length(y) = 5
y(1) = 0.4 < 1   ----> z(1) = y(1) - 2 = -1.6
y(2) = 0.8 < 1   ----> z(2) = y(2) - 2 = -1.2
y(3) = 1.2 > 1   ----> z(3) = y(3) + 2 = 3.2
y(4) = 1.6 > 1   ----> z(4) = y(4) + 2 = 3.6
y(5) = 2.0 > 1   ----> z(5) = y(5) + 2 = 4.0
z =
    -1.6 -1.2 3.2 3.6 4.0