



DF-3005

Second Year B. Sc. (Sem. III) Examination

March/April – 2016

**Electronics for Computer Science : Paper - V
(Simulation Using MATLAB)**

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="SECOND YEAR B. SC. (SEM. 3)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="ELECTRONICS FOR COMPUTER SCIENCE - 5"/>	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="5"/>	<input type="text" value="Student's Signature"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	

- (2) All 28 questions are compulsory.
- (3) Symbols and terminology used here have their usual meanings.
- (4) Scientific calculator is allowed.

Q. 1 to 12 Multiple choice questions : (1 mark)

Q. 13 to 22 Multiple Choice Questions : (2 marks)

Q. 23 to 28 Multiple Choice Questions : (3 marks)

*O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ
O.M.R. Sheet-ની પાછળ છાપેલ છે.*

*Important instructions to fillup O.M.R. Sheet
are given back side of provided O.M.R. Sheet.*

- 1 To modify MATLAB search path, we use
- (A) Editpath
 - (B) Both of these
 - (C) None of these
 - (D) Path
- 2 Pwd
- (A) List content of current directory
 - (B) Shows the current working directory
 - (C) None of these
 - (D) Change the current working directory
- 3 Which of the following MATLAB calculations would result the value 1
- (A) $5/2*3$
 - (B) $3^{2/3}*8$
 - (C) None of these
 - (D) $1+4/6$
- 4 The difference between a function and a script is :
- only
- (A) only a function requires inputs
 - (B) only a script file can perform a series of commands
 - (C) function variable names only have meaning within the, whereas script variables are available to other programs.
 - (D) function file can be run from the command line

- 5 Which of the following MATLAB expression gives -1 ?
- (A) `cosd [pi]`
 - (B) `sind [3*pi/2]`
 - (C) `sin [-pi/2]`
 - (D) `cos [180]`
- 6 MATLAB desktop is
- (A) The command window
 - (B) Directory pane
 - (C) None of these
 - (D) The place where MATLAB puts you when you launch
- 7 The P-files are created with the
- (A) Ncode command
 - (B) Pcode command
 - (C) None of these
 - (D) pcode command
- 8 Editor window is the place of
- (A) Where you edit
 - (B) Where you create
 - (C) All of these
 - (D) Where you write

- 9 M-files are
- (A) Hex files
 - (B) Both of these
 - (C) None of these
 - (D) Standard ASCII text files
- 10 The command “what” will
- (A) Lists only M-, on the disk
 - (B) Lists only Mex-files on the disk
 - (C) Lists M-, Mat- and Mex-files on the disk
 - (D) Lists Mat- on the disk
- 11 The “workspace pane” will
- (A) Lists all values of variable
 - (B) Both of these
 - (C) None of these
 - (D) Lists all variables
- 12 Whos will
- (A) show only workspace
 - (B) both of these
 - (C) none of these
 - (D) lists variables currently in the workspace with their size

- 13 If $x = [1 \ 5 \ 3 \ 7]$ $y = [0 \ 2 \ 8 \ 7]$ then what will be the value of k, if $k = x < y$
- (A) $[1 \ 1 \ 1 \ 0]$
 - (B) $[0 \ 0 \ 1 \ 0]$
 - (C) None of these
 - (D) $[2 \ 0 \ 1 \ 0]$
- 14 If $a = \text{rand}(12)$ and $u = \text{rand}(10,1)$ will
- (A) Create 12×12 matrix A and 10×1 vector u
 - (B) Both of these
 - (C) None of these
 - (D) Create 10×10 matrix A and 12×1 vector u
- 15 The equation to plot sine waves fplot must be
- (A) Fplot ('x.*sin(x)',[0 11*pi])
 - (B) Fplot('x.*sin2(x)',[0 12*pi])
 - (C) None of these
 - (D) Fplot ('x.*sin(x)',[0 10* pi])
- 16 To draw 2-D plots we need
- (A) Yvalues
 - (B) Style-option
 - (C) All of these
 - (D) Xvalues
- 17 To draw 3-D plot using MATLAB we must have
- (A) Y and z
 - (B) X, y, z and 'style-option'
 - (C) All of these
 - (D) X and y

- 18 To generate and plot the surface we need
- (A) linspace (-3,3,50)
 - (B) linspace (-1,1,10)
 - (C) All of these
 - (D) linspace (-2,2,100)
- 19 What will be the answer by Computing $\sin^2 \pi/6 + \cos^2 \pi/6$ using MATLAB ?
- (A) 1.0011
 - (B) 3.0013
 - (C) 1.0000
 - (D) 1.1111
- 20 If $x = [6 \ 6 \ 6]$ & $y = [3 \ 3 \ 3]$ then $x+y$ will be
- (A) [1 1 1]
 - (B) [3 3 3]
 - (C) [6 6 6]
 - (D) [5 5 5]
- 21 To plot a circle using MATLAB, the linspace must be declared as
- (A) linspace (1,2*pi,10)
 - (B) linspace (0,2*pi,100)
 - (C) none of these
 - (D) linspace (1,4*pi,10)
- 22 What will be the value of y-coordinates of a line with slope $m = 0.5$ and the intercept $c = -2$ at the following x-coordinates,
 $x=0,1.5,3,4,5,7,9,10$.
- (A) [-2.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 3.0000]
 - (B) [-1.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 4.0000]
 - (C) [-6.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 6.0000]
 - (D) [-3.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 4.0000]

23 Which of the following command will create a vector x with 10 elements linearly spaced between 0 & 100 ?

(A) `linspace (10,20,100)`

(B) `linspace (0,100,100)`

(C) `linspace (0,100,10)`

(D) `linspace (0,10,100)`

24 If $A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$, what will be $A(2,3)$

(A) 2

(B) 4

(C) 6

(D) 3

25 What will be the value of factn if $n = 5$ in following program

```
function factn = factorial (n);
```

```
factn = 1;
```

```
for k = n:-1:1
```

```
factn = factn*k
```

```
end
```

(A) 102

(B) 402

(C) 120

(D) 240

- 26 If $A = \begin{bmatrix} x & y & z \\ m & n & o \\ p & q & r \end{bmatrix}$, what will be $A(3,1)$ -
- (A) m
 - (B) r
 - (C) o
 - (D) x
- 27 What will be the answer by Computing $2^5 / (2^5 - 1)$?
- (A) 1.0011
 - (B) 3.0013
 - (C) 4.2341
 - (D) 1.0323
- 28 If $x = [1 \ 2 \ 3]$ & $y = [3 \ 3 \ 3]$ and $z = [4 \ 4 \ 4]$ then $x+y$ and $x+z$ will be
- (A) Error, $[6 \ 6 \ 6]$
 - (B) $[5 \ 6 \ 7]$, $[4 \ 5 \ 6]$
 - (C) Error, Error
 - (D) $[4 \ 5 \ 6]$, $[5 \ 6 \ 7]$