

**B****DF-2999****Second Year B. Sc. (Sem. III) Examination****March / April - 2016****Applied Electronics : 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="APPLIED ELECTRONICS - 5"/>	<input type="text"/>
Subject Code No. : <input type="text" value="2"/> <input type="text" value="9"/> <input type="text" value="9"/> <input type="text" value="9"/>	Section No. (1, 2,.....) : <input type="text" value="1,2,3"/>
Student's Signature	

- (2) All questions are compulsory.
- (3) Section - 1 carry 12 marks.
- (4) Section - 2 carry 20 marks.
- (5) Section - 3 carry 18 marks.
- (6) Symbols and terminology used here have their usual meanings.
- (7) Scientific calculator is allowed.

***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
is given on back side of the provided O.M.R. Sheet.***

- 1 The command “what” will
 - (A) Lists M-, Mat- and Mex- files on the disk
 - (B) Lists Mat- on the disk
 - (C) Lists only M-, on the disk
 - (D) Lists only Mex-files on the disk

- 2 The ‘workspace pane’ will
 - (A) None of these
 - (B) Lists all variables
 - (C) Lists all values of variable
 - (D) Both of these

- 3 Whose will
 - (A) None of these
 - (B) lists variables currently in the workspace with their size
 - (C) show only workspace
 - (D) both of these

- 4 To modify MATLAB search path, we use
 - (A) None of these
 - (B) Path
 - (C) Editpath
 - (D) Both of these

- 5 Pwd
- (A) None of these
 - (B) Change the current working directory
 - (C) List content of current directory
 - (D) Shows the current working directory
- 6 Which of the following MATLAB calculations would result the value 1 ?
- (A) None of these
 - (B) $1+4/6$
 - (C) $5/2*3$
 - (D) $3^{2/3}*8$
- 7 The difference between a function and a script is only
- (A) function variable names only have meaning within the, whereas script variables are available to other programs.
 - (B) function file can be run from the command line
 - (C) only a function requires inputs
 - (D) only a script file can perform a series of commands
- 8 Which of the following MATLAB expression gives -1 ?
- (A) $\sin [-\pi/2]$
 - (B) $\cos [180]$
 - (C) $\cosd [\pi]$
 - (D) $\text{sind} [3*\pi/2]$

- 9 MATLAB desktop is
- (A) None of these
 - (B) The place where MATLAB puts u when u launch
 - (C) The command window
 - (D) Directory pane
- 10 The P-files are created with the
- (A) None of these
 - (B) pcode command
 - (C) Ncode command
 - (D) Pncode command
- 11 Editor window is the place
- (A) All of these
 - (B) Where you write
 - (C) Where you edit
 - (D) Where you create
- 12 M-files are
- (A) None of these
 - (B) Standard ASCII text files
 - (C) Hex files
 - (D) Both of these

- 13 To draw 2-D plots we need
- (A) All of these
 - (B) Xvalues
 - (C) Yvalues
 - (D) Style-option
- 14 To draw 3-D plot using MATLAB we must have
- (A) All of these
 - (B) X and y
 - (C) Y and z
 - (D) X, y, z and 'style-option'
- 15 To generate and plot the surface we need
- (A) All of these
 - (B) linspace (-2,2,100)
 - (C) linspace (-3,3,50)
 - (D) linspace (-1,1,10)
- 16 What will be the answer by Computing $\sin^2 \pi/6 + \cos^2 \pi/6$ using MATLAB?
- (A) 1.0000
 - (B) 1.1111
 - (C) 1.0011
 - (D) 3.0013
- 17 If $x = [6 \ 6 \ 6]$ & $y = [3 \ 3 \ 3]$ then $x+y$ will be
- (A) $[6 \ 6 \ 6]$
 - (B) $[5 \ 5 \ 5]$
 - (C) $[1 \ 1 \ 1]$
 - (D) $[3 \ 3 \ 3]$

- 18 To plot a circle using MATLAB, the linspace must be declared as
- (A) None of these
 - (B) `linspace (1,4*pi, 10)`
 - (C) `linspace (1,2*pi,10)`
 - (D) `linspace (0,2*pi,100)`
- 19 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) [-6.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 6.0000]
 - (B) [-3.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 4.0000]
 - (C) [-2.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 3.0000]
 - (D) [-1.0000 -1.2500 -0.5000 0 0.5000 1.5000 2.5000 4.0000]
- 20 If $x = [1 \ 5 \ 3 \ 7]$ $y = [0 \ 2 \ 8 \ 7]$ then what will be the value of k, if $k = x < y$
- (A) None of these
 - (B) [2 0 1 0]
 - (C) [1 1 1 0]
 - (D) [0 0 1 0]
- 21 If $a = \text{rand}(12)$ and $u = \text{rand}(10,1)$ will
- (A) None of these
 - (B) Create 10×10 matrix A and 12×1 vector u
 - (C) Create 12×12 matrix A and 10×1 vector u
 - (D) Both of these
- 22 The equation to plot sine waves fplot must be
- (A) None of these
 - (B) `Fplot ('x.*sin(x)',[0 10*pi])`
 - (C) `Fplot ('x.*sin(x)',[0 11*pi])`
 - (D) `Fplot('x.*sin2(x)',[0 12*pi])`

23 If $x=[1; 2; 3]$ & $y = [3\ 3\ 3]$ and $z = [4\ 4\ 4]$ then $x+y$ and $x+z$ will be

- (A) Error, [1 2 3]
- (B) [4 5 6], [5 6 7]
- (C) Error, Error
- (D) [5 6 7], [4 5 6]

24 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) 120
- (B) 240
- (C) 102
- (D) 402

25 If $\gg A = [x\ y\ z; m\ n\ o; p\ q\ r]$, what will be $A(3,1)$?

- (A) o
- (B) x
- (C) m
- (D) r

- 26 What will be the answer by Computing $2^5 / (2^5 - 1)$?
- (A) 4.2341
 - (B) 1.0323
 - (C) 1.0011
 - (D) 3.0013
- 27 If $x = [1 \ 2 \ 3]$ & $y = [3 \ 3 \ 3]$ and $z = [4 \ 4 \ 4]$ trhen $x+y$ and $x+z$ will be
- (A) Error, Error
 - (B) $[4 \ 5 \ 6]$, $[5 \ 6 \ 7]$
 - (C) Error, $[6 \ 6 \ 6]$
 - (D) $[5 \ 6 \ 7]$, $[4 \ 5 \ 6]$
- 28 Which of the following command will create a vector x with 10 elements linearly spaced between 0 & 100 ?
- (A) `linspace (0,100,10)`
 - (B) `linspace (0,10,100)`
 - (C) `linspace (10,20,100)`
 - (D) `linspace (0,100,100)`