



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"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	
Student's Signature	

- (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 Choise 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 MATLAB desktop is
 - (A) Directory pane
 - (B) None of these
 - (C) The place where MATLAB puts you when you launch
 - (D) The command window

- 2 The P-files are created with the
 - (A) Pncode command
 - (B) None of these
 - (C) pcode command
 - (D) Ncode command

- 3 Editor window is the place of
 - (A) Where you create
 - (B) All of these
 - (C) Where you write
 - (D) Where you edit

- 4 M-files are
 - (A) Both of these
 - (B) None of these
 - (C) Standard ASCII text files
 - (D) Hex files

- 5 The command “what” will
- (A) Lists only Mex-files on the disk
 - (B) Lists M-, Mat- and Mex-files on the disk
 - (C) Lists Mat- on the disk
 - (D) Lists only M-, on the disk
- 6 The “workspace pane” will
- (A) Both of these
 - (B) None of these
 - (C) Lists all variables
 - (D) Lists all values of variable
- 7 Whos will
- (A) both of these
 - (B) none of these
 - (C) lists variables currently in the workspace with their size
 - (D) show only workspace
- 8 To modify MATLAB search path, we use
- (A) Both of these
 - (B) None of these
 - (C) Path
 - (D) Editpath

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

- 13 What will be the answer by Computing $\sin^2 \pi/6 + \cos^2 \pi/6$ using MATLAB ?
- (A) 3.0013
 (B) 1.0000
 (C) 1.1111
 (D) 1.0011
- 14 If $x = [6 \ 6 \ 6]$ & $y = [3 \ 3 \ 3]$ then $x+y$ will be
- (A) $[3 \ 3 \ 3]$
 (B) $[6 \ 6 \ 6]$
 (C) $[5 \ 5 \ 5]$
 (D) $[1 \ 1 \ 1]$
- 15 To plot a circle using MATLAB, the linspace must be declared as
- (A) `linspace (0,2*pi,100)`
 (B) none of these
 (C) `linspace (1,4*pi,10)`
 (D) `linspace (1,2*pi,10)`
- 16 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) $[-1.0000 \ -1.2500 \ -0.5000 \ 0 \ 0.5000 \ 1.5000 \ 2.5000 \ 4.0000]$
 (B) $[-6.0000 \ -1.2500 \ -0.5000 \ 0 \ 0.5000 \ 1.5000 \ 2.5000 \ 6.0000]$
 (C) $[-3.0000 \ -1.2500 \ -0.5000 \ 0 \ 0.5000 \ 1.5000 \ 2.5000 \ 4.0000]$
 (D) $[-2.0000 \ -1.2500 \ -0.5000 \ 0 \ 0.5000 \ 1.5000 \ 2.5000 \ 3.0000]$
- 17 If $x = [1 \ 5 \ 3 \ 7]$ $y = [0 \ 2 \ 8 \ 7]$ than what will be the value of k, if $k = x < y$
- (A) $[0 \ 0 \ 1 \ 0]$
 (B) None of these
 (C) $[2 \ 0 \ 1 \ 0]$
 (D) $[1 \ 1 \ 1 \ 0]$

- 18 If $a = \text{rand}(12)$ and $u = \text{rand}(10,1)$ will
- (A) Both of these
 - (B) None of these
 - (C) Create 10×10 matrix A and 12×1 vector u
 - (D) Create 12×12 matrix A and 10×1 vector u
- 19 The equation to plot sine waves fplot must be
- (A) `Fplot('x.*sin2(x)',[0 12*pi])`
 - (B) None of these
 - (C) `Fplot ('x.*sin(x)',[0 10* pi])`
 - (D) `Fplot ('x.*sin(x)',[0 11*pi])`
- 20 To draw 2-D plots we need
- (A) Style-option
 - (B) All of these
 - (C) Xvalues
 - (D) Yvalues
- 21 To draw 3-D plot using MATLAB we must have
- (A) X, y, z and 'style-option'
 - (B) All of these
 - (C) X and y
 - (D) Y and z
- 22 To generate and plot the surface we need
- (A) `linspace (-1,1,10)`
 - (B) All of these
 - (C) `linspace (-2,2,100)`
 - (D) `linspace (-3,3,50)`

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

- 26 Which of the following command will create a vector x with 10 elements linearly spaced between 0 & 100 ?
- (A) `linspace (0,100,100)`
 - (B) `linspace (0,100,10)`
 - (C) `linspace (0,10,100)`
 - (D) `linspace (10,20,100)`
- 27 If $A = [1 \ 2 \ 3; 4 \ 5 \ 6; 7 \ 8 \ 9]$, what will be $A(2,3)$
- (A) 4
 - (B) 6
 - (C) 3
 - (D) 2
- 28 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) 402
  - (B) 120
  - (C) 240
  - (D) 102