Instructions:

(1) Fill up strictly the details of signs on your answer book.

(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)

OMR Sheet बरवा अंगेनी अतिसंधकृत सुविधाएँ अपेक्षा
OMR Sheet-ी पाढी अपेक्षा छे.

Important instructions to fill up OMR Sheet are given back side of provided OMR 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) Pcode 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
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

The “workspace pane” will
(A) Both of these
(B) None of these
(C) Lists all variables
(D) Lists all values of variable

Whos will
(A) both of these
(B) none of these
(C) lists variables currently in the workspace with their size
(D) show only workspace

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 $\sin^2 \frac{\pi}{6} + \cos^2 \frac{\pi}{6}$ 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\times10 \text{ matrix } A \text{ and } 12\times1 \text{ vector } u
(D) Create 12\times12 \text{ matrix } A \text{ and } 10\times1 \text{ vector } u

19 The equation to plot sine waves \texttt{fplot} must be

(A) \texttt{fplot('x.*sin2(x)',[0 12*pi])}
(B) None of these
(C) \texttt{fplot ('x.*sin(x)',[0 10* pi])}
(D) \texttt{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) \texttt{linspace} (−1,1,10)
(B) All of these
(C) \texttt{linspace} (−2,2,100)
(D) \texttt{linspace} (−3,3,50)

[ Contd...]
If $A = [x \ y \ z; \ m \ n \ o; \ p \ q \ r]$, what will be $A_{(3,1)}$?

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

What will be the answer by computing $2^5 / (2^5 - 1)$?

(A) 3.0013
(B) 4.2341
(C) 1.0323
(D) 1.0011

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 (0,100,10)
(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