

UNIVERSITY OF EDUCATION  
"UEXAM" Semester-IV, 2019  
BS Physics Session:2017-21

Course Code: COMP1113  
Subject: Computing Tools for Mathematics

Time Allowed: 75 Minutes.

Max. Marks: 33

Section II (Short Answer)

Q.2- Write short answers of the following.

3x5 = 15

- i. Given a system of linear equation. Use MATLAB to solve by Cramer rule.  
 $5 \times 3 = 15$   
 $x - y + t = 10, x - 2y - z = -20, 3x + 4y = 12, y - 2z + t = 20$
- ii. If the volume of cylinder of height  $h$  and radius  $r$  is given by  $V = \pi r^2 h$  use MATLAB to find the volume enclosed by a cylinder that is 12cm high with diameter 4cm.
- iii. What gives the following commands, if  $A$  is the matrix of order  $4 \times 4$ ?  
(i)  $A(:,2:3)$  (ii)  $A(3,:)=[]$  (iii)  $A(:)$
- iv. For  $0 \leq x \leq 100$  find the value of  $y$  if  $y = \frac{2x+3}{2x^3+4x}$ .
- v. If  $A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ -1 & 2 & 1 \end{bmatrix}$  Use  $A$  to create  $B = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 \\ 4 & 5 & 6 & -1 & 2 \\ -1 & 2 & 1 & 2 & 1 \end{bmatrix}$

Section III (Essay Type)

Answer the following Questions

6x3 = 18

- Q.3. Use Mat lab to solve  $\int x \sin^{-1} x dx$
- Q.4. Write a lower triangular matrix of order  $10 \times 10$  using for loop.
- Q.5. Write a table of 8 using for loop.