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M.D UNIVERSITY ,ROHTAK SCHEME OF STUDENT AND EXAMINATION CERTIFICATE COURSE IN MATLAB

w.e.f. the session 2024-25

SCHEME AND SYLLABUS

Name of the Department/ Centre/Institute	Engineering and Technology	Name of the course Coordinator	Dr. Neha Khurana
Course name	MATLAB	Course Code	24UEEECO1
No. of hrs/week (L+T+P)	(1+0+2)	Credits	3
Max. Marks	TB:35 IA:15 PRACTICAL: 25 IA: 05 EA:20	Time of end term examination	3hrs

Note: Examiner will set 9 questions in total . questions 1 will have 7 parts of 1 marks each from all units and remaining eight questions of 7 marks each to be set by taking 2 question from each unit. The student have to attempt 5 question in total 1st being compulsory and selecting one from each unit.

"Learning Objectives:

-) This course provides an introduction to the MATLAB and its basics.

-) This course tell about implementation in design and analysis of system in engineering and research.

Learning outcomes::

-) To understand basics of MATLAB

-) To perform basic operations

-) To code and understand MATLAB graphics

Unit–I

INTRODUCTION TO MATLAB : Introduction , Starting and Ending a MATLAB session, MATLAB environment ,help features ,types of files, search path ,some useful MATLAB commands ,summary

CONSTANTS ,VARIABLES AND EXPRESSIONS: Introduction,characterset,datatypes,constantsandvariables,operators,hierarchyofoperations,built-infunctions,assignment statement ,summary

Unit–II

VECTORS AND MATRICES: Introduction ,scalars and vectors ,entering data in matrices ,line continuation ,matrices subscripts/indices ,multi-dimensional matrices and arrays ,matrix manipulations, generation of special matrices, some useful commands related to matrices, matrix and array operations ,list of commands(vector ,matrix ,special matrix), summary

Unit–III

POLYNOMIALS: Introduction, entering a polynomial, polynomial evaluation, roots of polynomial ,polynomial addition and subtraction ,polynomial multiplication ,formulation of polynomial equation ,characteristic polynomial of a matrix ,polynomial differentiation and integration ,summary

Unit– IV:

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INPUT-OUTPUT STATEMENTS: Introduction , data input , interactive inputs
MATLAB GRAPHICS : Introduction ,2-Dplots ,style options ,legend command ,subplots

References:

MATLAB and Its Applications in Engineering, PEARSON Publication, Authors: Raj Kumar Bansal , Ashok Kumar Goel , Manoj Kumar Sharma

MATLAB Demystified, K.K. Sharma .

Mastering MATLAB, PEARSON Publication, Author: Hansel man Little field

Mastering MATLAB, Wiley Publication , Author : Gilat