

EXAMINATION II:

Velocity and Acceleration Analysis

A planar mechanism is shown in Fig. X. The input numerical data with the dimensions of the mechanism for ten cases are given in the table.

Determine the velocities and accelerations of the mechanism for the input angle ϕ using

The examination should contain:

I. Algebraic Method

- write-up of the kinematic equations and detailed explanations (50p);
- MATLAB/*Mathematica*TM programs for the input angle ϕ (50p);

Due Date: Sept. 26, 07

II. Derivative or/and Contour Method

- write-up of the kinematic equations and detailed explanations (50p);
- MATLAB/*Mathematica*TM programs for the input angle ϕ (50p);

Check the results of the methods.

Due Date: Oct. 03, 07

Graduate students: use all the three methods (algebraic, derivative, and contour methods)

Please submit your work using WEBCT.