MINOR II :CEL 864 STRUCTURAL HEALTH MONITORING
(2016-17)

Time allowed: 1hour   **Date**   : 28 March 2017
Venue   : IV LT 2   **Max marks :** 15

NOTE: (a) This question paper contains one page only. (b) All questions are compulsory. (c) **Assume any data which you deem is necessary but not supplied. (d)** Draw neat and clear sketches wherever required.
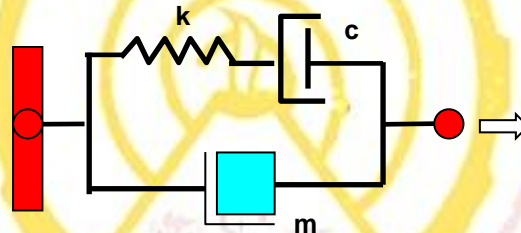
Question 1.

Derive an expression for the flexibility matrix of a structure in terms of modal matrices and related parameters which could be obtained experimentally.

(**5 marks**)

Question 2.

Derive an expression for the resultant mechanical impedance of the system shown below.   (**5 marks**)

Question 3.

Illustrate, using a single degree of freedom system, how impedance approach reduces otherwise a differential equation of classical dynamics into a simple algebraic equation.

(**5 marks**)