MINOR II :CEL836 STRUCTURAL HEALTH MONITORING
(2012-13)

Time allowed: 1hour   **Date** : 26 March 2013
Venue   : SAL (V 216)   **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.

What lessons were learnt by Farrar and Jauregui from the dynamic tests conducted on I-20 bridge at the time of its decommissioning in 1993.

(**4 marks**)

Question 2.

Differentiate between the stiffness and flexibility approach for damage detection. Which one will you prefer and why?

(**3 marks**)

Question 3.

Point out two similarities and two differences between the acoustic emission technique and the EMI technique.

(**2 marks**)

Question 4.

Derive an expression for mechanical strain in PZT patch acting as a sensor and an actuator in the EMI technique. The structure has a structural impedance of Z.

(**6 marks**)