DEPARTMENT OF CIVIL ENGINEERING

MINOR II :CVL 861 ANALYSIS AND DESIGN OF MACHINE FOUNDATIONS (2017-18)

Time allowed: 1hour
Venue : LH 310
Date : 27 March 2018
Max marks : 15

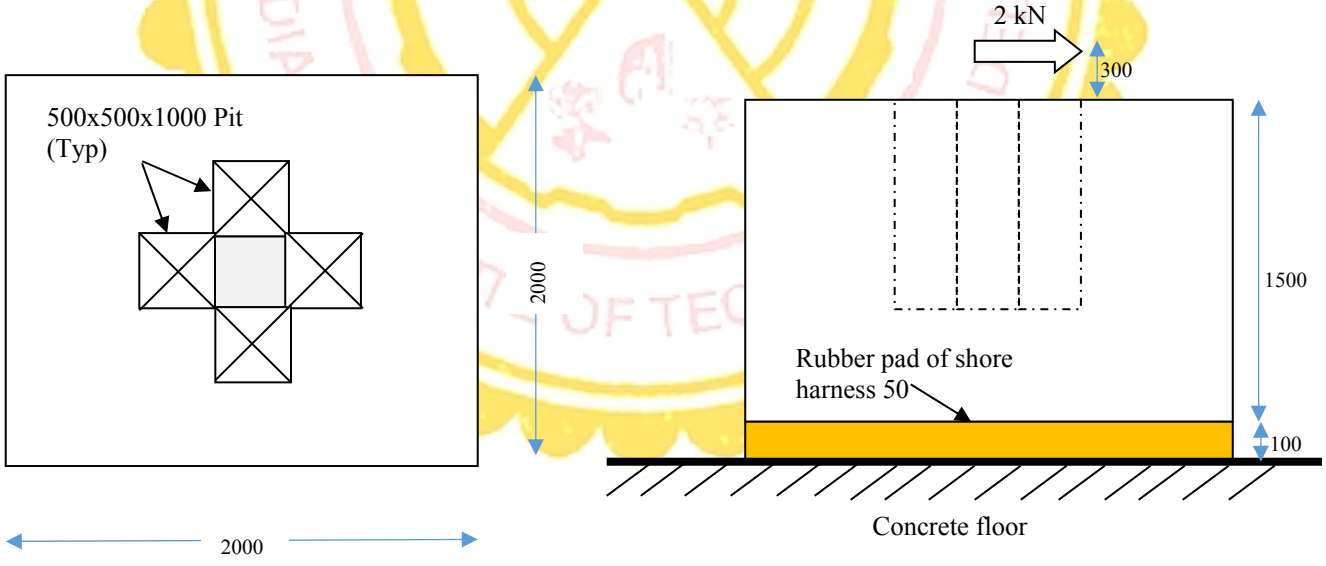
NOTE: (a) This question paper contains two questions and one page only. (b) All questions are compulsory. (c) **Assume any data which you deem is necessary but not supplied. (d)** Draw neat and clear sketches wherever required.

Question 1

A reciprocating machine operating in horizontal mode is resting on a concrete block in turn supported on an elastic pad as shown in the figure below (All dimensions shown are in mm). The machine operates at 100 Hz and exerts horizontal force as shown.

a) Check the adequacy of the system from resonance and vibration amplitude point of view **(10 marks)**
b) Calculate horizontal inertial force acting on the central pedestal. **(02 marks)**

c) Determine the transmissibility of vibrations. **(03 marks)**



PLAN ELEVATION