SRINIX COLLEGE OF ENGINEERING

1st INTERNAL EXAMINATION-2017-18

Subject-**AFE**   Semester-8TH   Branch-**CIVIL**

Full Mark-**30**   Time-**1.30Hrs**

ANSWER ALL THE QUESTIONS (PART-A)   [2X5]

1. Define frequency ratio, magnification factor, damping ratio and natural frequency.
2. List the types of Coffer dams.
3. Explain the coefficient of elastic uniform shear.
4. Define degree of freedom with example.
5. Discuss modes of vibrations.

ANSWER ANY TWO QUESTIONS (PART-B)   [10X2]

1. Using Barken's expression for natural frequency and the amplitude of vibration calculate the change in percentage amplitude in terms of 'r' if the soil mass participating in the vibration is 23% of 'm'. Also calculate this charge for r=0.3 and r=2.

2. What are the different types of machine foundations used for different kinds of machinery? Give neat sketches.

3. Explain the general criteria for the design of machine foundation.

4. Explain the standard block vibration test for determination of dynamic properties of soil.

5. Assuming resonance to have occurred at the frequency of 22 cycles/second in a vertical vibration of a test block, $1.0 \times 1.0 \times 1.0$ m size, determine the coefficient of elastic uniform compression (C_u). The weight of oscillator is 62 Kg and the force produced by it at 12 cycles/second is 100 Kg. Also compute the maximum amplitude in vertical direction at 12 cycles/second.