



REGISTRATION NUMBER 

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## SRINIX COLLEGE OF ENGINEERING

INTERNAL EXAMINATION-2018-19

Subject-AMOS

Semester-4<sup>TH</sup>

Branch-CIVIL

Full Mark-50

Time-2.00Hrs

**ANSWER ALL QUESTIONS (PART-A)**

**[2X10=20]**

1. What is the condition for pure shear?
2. Why stress is call as tensor quantity?
3. Which material gives best result for maximum principal stress theory?
4. Calculate the position of neutral axis of a curve beam.
5. What is the difference between thick and thin cylinder?
6. Define compound cylinder.
7. Define stress invariants.
8. What do you mean by unsymmetrical bending?
9. Define shear centre.
10. Define strain rosette and its types.

**ANSWER ALL THE QUESTIONS (PART-B)**

**[6X3=18]**

1. Differentiate between plane stress and plane strain condition.
2. Derive the equilibrium equation.
3. Locate the shear centre for a channel section.
4. At a point P, the rectangular stress components are

All units are in kpa. Find the principal stresses.

**ANSWER ANY ONE QUESTION (PART-C)**

**[12X1=12]**

1. A cantilever beam of rectangular c/s is subjected to a concentrated load of 10KN at free end. The length, breadth and depth of beam are 1m, 10cm and 15cm respectively. The line of action of load makes  $30^0$  with vertical. Determine the maximum stress in the beam.
2. A crane hook has a trapezoidal c/s. Determine the total stresses of inner and outer fibre of a crane hook according to you.

