

EASTERN UNIVERSITY, SRILANKA
EXTERNAL DEGREE
First Year First Semester Examination in Agriculture 2005/2006
(Repeat Examination)

AEN - 1101 APPLIED MECHANICS (1:15/00)

Answer all questions

Time: One hour

01. (i) Distinguish between tension and compression in an object.

(ii) If the angular acceleration of a moving object is $\omega^2 r$, derive a formula for centrifugal force. Assume that the weight of the object is W , radius of circular path is r , angular velocity of the object is ω (rad/s) and gravitational acceleration is g m/s⁻².

(iii) State the law of friction.

02. (i) With the aid of a diagram, explain the stress-strain curve for a mild steel under tension.

(ii) Briefly explain as to how the temperature stress is being created when the temperature of an object changes.

(iii) Define the following:

- (a) Elasticity
- (b) Malleability
- (c) Ductility
