Course: ESM-231- Strength of Material

Assignment No: II

Submission Date: 10 November 2016

Instructions:

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your name ,programmed and enrollment number clearly at the top of the Pages

Q.1

a) A bar of steel 28 mm in diameter was subjected to a tensile load of 6 tonnes and the measured extension on a 20 cm gauge length was 0.01 cm and the change in diameter was 0.00038 cm. Calculate the Poisson`s ratio and Young`s modulus.

b) A mild steel bar 7 m long is of 5 cm diameter for 3 m of its length and 2.5 cm diameter for the remaining length. The bar is subjected to a tensile force such that the maximum stress produced in it is 1200 kg/cm^2. Determine the total elongation of the bar and change in diameter at the smallest section. Take E = 2 X 10^6 kg/cm^2 and Poisson`s ratio = 0.25.

Q.2

a) Show that in a strained material under two dimensional stress system, the sum of normal components of stress acting on any two mutually perpendicular planes is constant.

b) A cylindrical shell is 3 m long, 1.5 m internal diameter and 20 mm metal thickness. Calculate the intensity of maximum shear stress induced and also change in dimensions of the shell if it is subjected to an internal pressure of $2N/mm^2$. Take E = 0.2 X 10^6 N/mm^2 and $\mu = 0.3$.

Course: ECE-232-BUILDING MATERIAL & CONSTRUCTION

Assignment No: II

Submission Date: 10 November 2016

Instructions:

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your name ,programme and enrollment number clearly at the top of the Pages

Q.1

a) What are the advantages of plastics in comparison of steel?

b) What are the main components of paints? Explain in detail?

Q.2

a) What is the insulating material? Explain their uses in various fields?

b) What are cemented paints and why paint is important for outdoor walls?

Course: EFM-233-Fluid Mechanics

Assignment No: II

Submission Date: 10 November 2016

Instructions:

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your name ,program and enrollment number clearly at the top of the Pages

Question 1

a. What is Manometers? What do you mean by Single manometers? How are they used for the measurement of pressure?
b. Write a short note on:-
   i. Uniform and Non-uniform flow
   ii. Stability of Submerged body.
   iii. Total pressure and Centre of pressure.

Question 2

a. A single U-tube manometer containing mercury is connected to a pipe in which a fluid of sp. gravity 0.8 and having vacuum pressure is flowing. The other end of the manometer is open to atmosphere. Find the vacuum pressure a pipe, if the difference of mercury level in two limbs is 40cm and height of fluid in the left from the center of pipe 15cm below.
b. Derive an expression for force extended on a submerged vertical plane surface by the static liquid and locate the position of centre of pressure.

Course: ECE-234-SURVEYING--1

Assignment No: II

Submission Date: 10 November 2016

Instructions:

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your name ,program and enrollment number clearly at the top of the pages.

Q.1

(a) What do you mean by balancing a traverse? State the various rules meant it.

(b) What is a simple circular curve? Why these are needed.

Q.2

(a) Give in details different linear method of setting out simple circular curves.

(b) Derive distance formula and elevation of point in fixed stadia method with horizontal line of sight.

Course: EIS-235-Industrial Sociology

Program: B.Tech III Sem(All Branch)

Submission Date: 05 November 2016

Assignment No: II

Instructions:

1. Write the assignment in your own handwriting.
2. Submit assignment to your concerned faculty (Dr. Soma Das) within given time.
3. Write your name, programme, course, roll no. and enrollment number clearly at the separate sheet.

1.

(a) Define Indian Industrial Policy 1948.

(b) Describe 1956 Industrial Policy Resolution.

2.

(a) Describe Grievance Handling Procedure.

(b) Explain Bipartite and Tripartite Agreement.

COURSE: - EEM-236 ENGINEERIENG MATHEMATICS-III

Assignment No-II

Date of submission:-10.11.2016

Instructions

a) Write the response to the assignment in your own handwriting.
b) Submit the response to your HoD within the due date.
c) Write your name, Programme and Enrolment No. clearly at the top of the page.

Q.1

a) Prove $\Delta\nabla = \Delta - \nabla$

b) find the root of $(17)^{\frac{1}{3}}$ correct upto three decimal places

Q.2

a) If θ be the acute angle between to the two regression lines in the case of two variable x and y. Show that

$$\tan\theta = \frac{1-r^2}{r}\frac{\sigma_x\sigma_y}{\sigma_x^{\,2}+\sigma_y^{\,2}}$$

b) A sample of 100 dry cells tested to find the length of life produced the following results: $\bar{x}$ = 12 hours, σ = 3 hours

Assuming the data to be normally distributed, what percentage ofbattery cells are expected to have life-

(i) More than 15 hours
(ii) Less than 6 hours
(iii) Between 10 and 14 hours?