Course: ECE-352 Environmental Engineering-1

Assignment No: 1

Due date of submission: 10.11.2016

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, programmer and Enrollment number clearly at the top of the Page.

Q.1

a) Write the various sources of water and their characteristics.

b) Explain the term ‘Variation in Demands’.

Q.2

a) Write the Basic needs and factors affecting consumption of water.

b) Explain Intake structure with diagram.

Course: ECE-353 - Geotechnical Engineering

Assignment No: 1

Submission Date: 10 November 2016

Instructions:

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

Q.1

a) What is soil mechanics and what is the use of soil mechanics in civil engineering?

b) Explain any 7 types of soil in detail?

Q.2

a) Explain any 3 methods for particle size distribution?

b) Explain the transportation of soil?

Course: ECE-354-Design of concrete structure -I

Assignment No: 1

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, programmer and Enrollment number clearly at the top of the Page.

Q.1

a) Define singly reinforced concrete beam. Write the assumption made in singly reinforced concrete beam.

b) The cross – section of a singly reinforced concrete beam is 250 mm wide and 500 mm deep (effective) which consist of 4 numbers 20 mm diameter to the centre of the reinforcement. Find the actual depth of neutral axis.

Q.2

a) Prove that:- Moment of resistance = Qbd^2

b) A reinforced concrete beam is of rectangular section whose width is b (mm) and effective depth is d (mm).The values or permissible stresses are σ_{cb}= 5N/mm^2, σ_{st} = 140N/mm^2.

Take m = 18 , now find out

i) Criticl depth of neutral axis
ii) Lever arm
iii) Moment of resistance
iv) Percentage of steel.

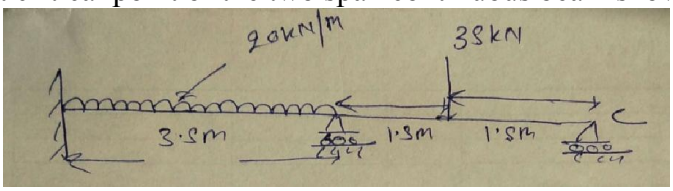
Course: ECE-355-Structural Analysis-II
Assignment No: 1
Submission Date: 10 November 2016

Instructions:

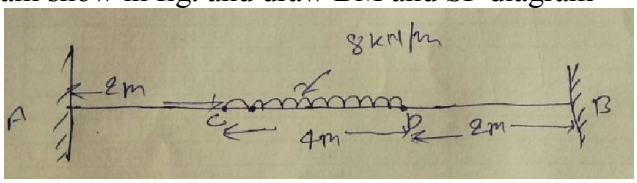
1. **Write the responses to the assignment in your own handwriting.**
2. **Submit the responses to your HOD with in the due date.**
3. **Write your name ,programme and enrollment number clearly at the top of the Pages.**

Q.1

a) Find the moments at critical point of the two span continuous beam show in fig.

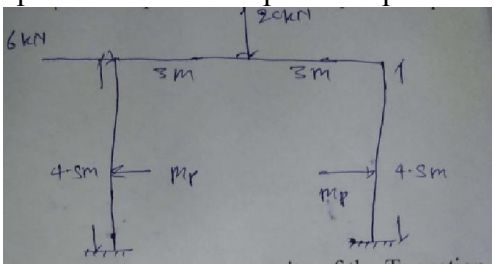


b) Analysis the fixed beam show in fig. and draw BM and SF diagram

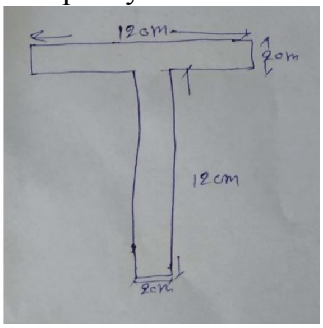


Q.2

a) Find the value of m_p for the portal and loaded up to collapse as shown in fig .



b) Determine the fully plastic moment capacity of the T- section shown in fig.



Course: ECE-356- Transportation Engineering- I

Assignment No: 1

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, programmer and Enrollment number clearly at the top of the Page.

Q:1-

a. Write the classification of roads according to I.R.C. Explain in briefly.
b. Write a short note on:-

i. National highway
ii. Kerbs
iii. Super elevation

Q:2-

a. Explain about the Nagpur Road Conference in briefly.
b. Calculate the safe stopping sight distance for design speed of 50 kmph for (a) two-way traffic on a two lane road (b) two way traffic on a single plane road. Assume coefficient of friction as 0.37 and reaction time of driver as 2.5 seconds.