

**Course: ECE-472-Design of Steel Structure**  
**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) Calculate the strength of a 20mm dia. bolt of grade 4.6 for the following cases. The main to be joint are 12mm thick

- i. Lap joint
- ii. Single cover butt joint ;covers plate being 10mm thick
- iii. Double cover butt joint each of the cover being 8mm thick

(b) Two flats (Fe410 Grade steel ) ,each 210x8mm are to be joint using 20mm dia . 4.6 grade bolt to form a lap joint .The joint is supposed to transfer a factored loaded of 250KN .Design the joint and determine suitable pitch for bolts

**Q.2**

(a) A120mm diameter and 6mm thick pipe is fillet welded to a 14mm plate .It is subject to a vertical factored load of 4.5kN at 1m from the wlded end and a factored twisting moment of 1.8kNm. Design the joint assuming the shop welding and steel of grade Fe410.

(b) Explain the tension member , slenderness ratio, displacement.

**Course: ECE-473-Open Channel Flow**

**Assignment No: 1**

**Submission Date: 10 November 2016**

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**Q.1**

- a) What are the difference between open channel flow and pipe flow?
- b) Explain the classifications of flow?

**Q.2**

- a) Explain mass, energy and momentum equation?
- b) Explain the concept of specific energy?

**Course: ECE-474 Water Resources Engineering**

**Assignment No: 1**

**Due date of submission: 10.11.2016**

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**Q.1**

- a) What do you mean by Hydrological cycle? Write in detail with figure.
- b) Define Precipitation .Write also its types.

**Q.2**

- a) Explain the Intensity during Frequency (IDF) curve?
- b) Define Evaporation. Write also factors affecting Evaporation.

**Course: ECE-475 Industrial Pollution Control and Environmental Audit**

**Assignment No: 1**

**Due date of submission: 10.11.2016**

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Q.1

- a) What do you mean by Industrial wastes? Write also its types.
- b) Discuss the effects of noise pollution and radiation emission.

Q.2

- a) Write the Various collection, Storage treatment & Disposal of Wastes?
- b) Define Waste Management Approach.