

**B.TECH (CHEMICAL ENGG), 7<sup>TH</sup> SEM.,**

**PROGRAMME: B.TECH (CHEMICAL ENGG), 7<sup>TH</sup> SEM,  
AIR POLLUTION AND CONTROL EQUIPMENTSE  
ECHE-473**

**ASSIGNMENT NO:1**

**Due date of submission: 11.09.2017**

Instructions

1. Write the response to the assignment in your own handwriting.
2. Submit the response to your HOD within the due dates
3. Write your name, programmed and enrolment No. clearly at top of the page.

Q1)

- a) Define air pollution. Explain electrostatic precipitators?
- b) What are Fibrous filters and the sources of air pollution?

Q.2)

- a) Define sound pressure and noise pollution.
- b)What are the effects of air pollution? What is the air sampling?

**PROGRAMME: B.TECH (CHEMICAL ENGG), 7<sup>TH</sup> SEM, PROCESS  
MODELLING AND SIMULATION, ECHE-472**

**ASSIGNMENT NO:1**

**Due date of submission: 11.09.2017**

**Instructions**

- 1. Write the response to the assignment in your own handwriting.**
- 2. Submit the response to your HOD within the due dates**
- 3. Write your name, programmed and enrolment No. clearly at top of the page.**

Q1)

- A) Discuss briefly process modeling and simulation technique?
- B) What are continuity equations and energy equation?

Q.2)

- A) What are the applications of process models?
- B) Design a mathematical model for CSTR?

**PROGRAMME: B.TECH (CHEMICAL ENGG), 7<sup>TH</sup> SEM,**

**(INDUSTRIAL SAFETY AND HAZARD MANAGEMENT, ECHE-471)**

**ASSIGNMENT NO:1**

**Due date of submission: 11.09.2017**

Instructions

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Q1)

- a) What are the health Hazards due to radiation?
- b) What are the health hazards due to excess of noise and vibrations?

Q.2)

- a) Describe plant layout and safety considerations in plant layout.
- b) What is industrial toxicology? What are the effects of toxic substances on human system?

**PROGRAMME: B.TECH (CHEMICAL ENGG), 7<sup>TH</sup> SEM ,**

**NON CONVENTIONAL ENERGY RESOURCES, ECHE-475**

**ASSIGNMENT NO:1**

**Due date of submission: 11.09.2017**

Instructions

1. Write the response to the assignment in your own handwriting.
2. Submit the response to your HOD within the due dates
3. Write your name, programmed and enrolment No. clearly at top of the page.

Q1)

- a) Define conventional energy resources. What is advantage of non conventional energy resources?
- b) Define thermo electric conversion principle. Define solar thermal energy.

Q.2)

- a) Define geothermal energy. What is solar heating element?
- b) Define wind energy. What is biogas?

**PROGRAMME: B.TECH (CHEMICAL ENGG), 7<sup>TH</sup> SEM,**

**PLANT DESIGN AND ECONOMICS , ECHE-474**

**ASSIGNMENT NO:1**

**Due date of submission: 11.09.2017**

**Instructions**

**1. Write the response to the assignment in your own handwriting.**

**2. Submit the response to your HOD within the due dates**

**3. Write your name, programmed and enrolment No. clearly at top of the page.**

Q1)

a) What are different steps of process selection?

b) What are material and energy balance of process?

Q2)

a). What are selection and specification of plant?

b) Give guide line for start up and shutdown of plant.