

Sample Question Paper

Course Name : Diploma in Chemical Engineering

Course Code : CH

Semester : Sixth

Subject Title : Environmental Technology

Marks : 100

17646

Time: 3 Hours

Instructions:

1. All questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Figures to the right indicate full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

Q1.a) Attempt any THREE

12 Marks

1. Define Air Pollution. List classification with two examples of each.
2. List any eight sources of water pollution.
3. Name the methods used for pollution control in Fertilizer industry.
4. State any four characteristics of solid waste.

Q1.b) Attempt any ONE

08 Marks

1. Write procedure of working of High volume sampler with neat sketch.
2. Describe methods for solid waste collection.

Q2. Attempt any FOUR

16 Marks

1. State the principle of Incineration. Draw neat labeled sketch of catalytic incinerator.
2. State any four drinking water quality standards specified by WHO.
3. Explain working of Trickling filter.
4. Explain 3R principle for solid waste management.
5. State the necessity of Environmental Audit for any chemical plant.

Q3. Attempt any FOUR

16 Marks

1. Explain freeze out sampling method for gaseous pollutant.
2. State the effect of air pollution on human health.

3. List out physical and chemical characteristics of waste water, four each.
4. Name the equipments which can be used for the control of cement dust. Explain its working principle.
5. State the role of pollution control board.
6. Name the methods used for waste water sampling? Explain any one?

Q4.a) Attempt any THREE

12 Marks

1. State the necessity of sludge treatment. Explain process of sludge thickening.
2. Name the primary treatment methods for waste water and explain any one in details.
3. Write working principle of Cyclone separator with its neat diagram.
4. How business will be benefited after implementation of ISO 14001.

Q4.b) Attempt any ONE

08 Marks

1. State the necessity of recovery of chemicals from black liquor.
2. Outline the objectives and components of Environment management.

Q5. Attempt any FOUR

16 Marks

1. Why safety precautions are required while handling electrostatic precipitator. State its advantages and disadvantages.
2. Name the sources of Biomedical waste and list its treatment methods.
3. State the principle of activated sludge treatment method and explain its working.
4. State the necessity of ISO 14001 certification.
5. Describe sludge dewatering and disposal methods.
6. Identify possible effects of water pollution on eco system.

Q6. Attempt any FOUR

16 Marks

1. Describe construction and working of Gravity settling chamber.
2. Explain working of Venturi scrubber with neat labeled sketch.
3. State the meaning of the terms BOD and COD. State its significance.
4. List the pollutants coming out from Urea plant.
5. Explain flotation method for waste water treatment.
6. State the possible ways to create wealth from waste.

Scheme – G

Sample Test Paper - I

Course Name : Diploma in Chemical Engineering

Course Code : CH

Semester : Sixth

Subject Title : Environmental Technology

Marks : 25

17646

Time: 1 Hour

Instructions:

1. All questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Figures to the right indicate full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

Q1. Attempt any THREE

09 Marks

- a) List out any six gaseous pollutants
- b) Name the three methods each for gaseous and particulate sampling.
- c) Write drinking water quality standards prescribed by WHO.
- d) Name three materials used for the filter medium in fabric filter.

Q2. Attempt any TWO

08 Marks

- a) Explain construction and working of cyclone separator.
- b) State the role of pollution control board.
- c) Explain principle and working of dust fall jar.

Q3. Attempt any TWO

08 Marks

- a) State the significance of BOD and COD in waste water.
- b) Draw neat labeled diagram of electrostatic precipitator.
- c) Explain the effect of carbon monoxide and sulfur dioxide on human health.

Sample Test Paper - II

Course Name : Diploma in Chemical Engineering

Course Code : CH

Semester : Sixth

Subject Title : Environmental Technology

Marks : 25

17646

Time: 1 Hour

Instructions:

1. All questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Figures to the right indicate full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

Q1. Attempt any THREE

09 Marks

- a) Name the pollutant produced in the Urea plant.
- b) Draw labeled diagram of trickling filter.
- c) List the business benefit of ISO 14000.
- d) Write any six characteristics of solid waste.

Q2. Attempt any TWO

08 Marks

- a) Explain the method for recovery of Black liquor.
- b) Explain 3R principle for solid waste management.
- c) Write the procedure for Environment Audit.

Q3. Attempt any TWO

08 Marks

- a) Explain sludge thickening and digestion method.
- b) Write the sources of Biomedical waste and list the treatment methods for it.
- c) Explain the working of activated sludge method.