

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018**

ENVIRONMENTAL ENGINEERING

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I. Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Define specific yield of a well.
2. Write the necessity of using coagulants in sedimentation.
3. Define chemical oxygen demand or COD.
4. Define Aerosol.
5. List any four methods for controlling air pollution.

(5×2 = 10)

PART — B

(Maximum marks : 30)

II. Answer any *five* of the following questions. Each question carries 6 marks.

1. Explain with neat sketch an infiltration gallery.
2. Discuss the reasons for carrying out analysis of water.
3. List the requirements of good disinfectant.
4. Explain different systems of supply of water.
5. Enumerate various methods for sludge disposal.
6. Define manhole. Explain objects of providing manhole in sewer lines.
7. With a neat sketch explain flashing cistern.

(5×6 = 30)

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks)

UNIT — I

- III (a) Explain various methods of forecasting population of a town. 8
 (b) Define pH value of water. Explain the tests conducted to determine pH of water. 7

OR

- IV (a) Explain the pumping test conducted to determine the yield of well 8
 (b) Write short notes on bacteriological analysis of water. 7

UNIT — II

- V (a) Describe the working of Rapid sand filter with a neat sketch 8
 (b) Explain the different joints used for connecting water supply pipes. 7

OR

- VI (a) With neat sketch explain the Grid Iron System for water distribution and compare advantages and disadvantages. 8
 (b) Explain with a neat sketch the functioning of a post fire hydrant. 7

UNIT — III

- VII (a) Compare conservancy systems and water carriage system of disposal of sewage. 8
 (b) Explain the factors affecting dry weather flow. 7

OR

- VIII (a) Discuss the different cross sections used for the main sewers. Write the main advantages of an egg shaped sewer 8
 (b) Describe drop manhole with neat sketch. 7

UNIT — IV

- IX (a) With a neat sketch explain the working of septic tank. 8
 (b) Explain the sources of air pollution. 7

OR

- X (a) Describe with neat sketch the operation of biogas plant using cow dung and agricultural wastes. 8
 (b) Explain the effect of air-pollution on human being and on vegetation. 7