

R16

Code No: 136BT

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, March - 2024

ENVIRONMENTAL ENGINEERING

(Civil Engineering)

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART - A

(25 Marks)

- 1.a) Name out any two waterborn diseases. [2]
- b) What are the various sources of water? [3]
- c) Define sedimentation. [2]
- d) Give the importance of rapid gravity filters. [3]
- e) What is distribution system requirements? [2]
- f) Name out various valves and their importance. [3]
- g) What are sewage characters? [2]
- h) Give brief note on house drainage. [3]
- i) What is grit chamber? [2]
- j) Explain importance of trickling filters. [3]

PART - B

(50 Marks)

- 2.a) Why water supply should be protected, explain.
 - b) Give brief note on drinking water standards. [5+5]
- OR**
- 3.a) Describe various types of water demands.
 - b) Give brief note on infiltration galleries. [5+5]
- 4.a) Explain flocculation clarifier design.
 - b) Give brief note on filtration theory, explain importance of multimedia filters. [5+5]
- OR**
- 5.a) How filters will be design, give the troubles in design?
 - b) What is disinfection, explain their practices. [5+5]
- 6.a) Give brief note on Hardy Cross pipe design.
 - b) What is the importance of laying and testing of pipe lines? [5+5]
- OR**
- 7.a) Describe conservancy and water carriage systems.
 - b) Why distribution system required, explain its layout. [5+5]

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8.a) Explain sewage decay and decomposition.

b) Compare one pipe and two pipe systems of plumbing.

[5+5]

QA QA QA QA OR QA QA QA G

9.a) Define COD, explain sewers design.

b) Describe sanitary fittings and traps.

[5+5]

10.a) Illustrate construction and design of oxidation ponds.

b) Explain biological treatment and its importance.

[5+5]

OR

11.a) Distinguish skimming and sedimentation tanks.

b) Explain sludge disposal by drying.

[5+5]

QA QA QA QA QA QA QA G

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QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G