

ENVIRONMENTAL ENGINEERING

Course code	Course Title	No. Of periods/week	Total No. Of periods	Marks for Formative Assessment	Marks for Summative Assessment
C-502	Environmental Engineering	05	75	20	80

Model Paper for Unit Test-I

State Board of Technical Education and Training,

A.P.Diploma in Civil Engineering (DCE)

Fifth Semester :C-502 ENVIRONMENTAL ENGINEERING

Time: 90 Minutes

Unit Test –I

Maximum

Marks : 40

PART- A

16 Marks

Instructions :

(i) Answer all questions

(ii) First question carries FOUR marks, each question of remaining carries THREE marks.

- For an average Indian conditions, per capita consumption of water is ____lpcd. (CO1)
 - Yield per unit draw down is called_____. (CO1)
 - In water treatment plants, commonly used coagulant is_____ (CO2)
 - The valve which allows flow in one direction is called_____ (CO2)
- What is the difference between environment and ecology? (CO1)
- List various surface and sub surface sources of water. (CO1)
- List out the objects of sedimentation. (CO2)
- What is the function of sluice valve? Draw the sketch. (CO2)

PART- B

3 x 8 = 24 Marks

Instructions :

(i) Answer all questions

(ii) Each question carries EIGHT marks

(iii) Answer should be comprehensive and the criterion for valuation is the content butnot the length of the answer.

- (A) Estimate the future population of the town in 2021 by Arithmetic Increase method andIncremental Increase method.(CO1)

Year	1931	1941	1951	1961	1971	1981	1991
Population	350000	466000	994000	1560000	1623000	1839000	2430000

(OR)

(B) Describe briefly the construction and working of Infiltration wells with the help of neat sketch.
(CO1)

7. (A) Explain working of a slow sand filter with the aid of neat sketch. (CO2)

(OR)

(B) What do you understand by "Break point chlorination" and explain with the help of diagram the significance of various stages in it. (CO2)

8. (A) Explain "Grid iron system" with a sketch and mention the advantages and disadvantages.
(CO2)

(OR)

(B) How do you detect leakages and what are the preventive measures. (CO2)

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Model Paper for Unit Test-II:
State Board of Technical Education and Training,
A.P.Diploma in Civil Engineering (DCE)
Fifth Semester : C-502 ENVIRONMENTAL ENGINEERING

Time: 90 Minutes

Unit Test –II

Maximum Marks : 40

PART- A

16 Marks

Instructions :

(i) Answer all questions

(ii) First question carries FOUR marks, each question of remaining carries THREE marks.

1. (a) Rational formula for calculation of storm water flow is given by $Q = \underline{\hspace{2cm}}$ (CO3)
(b) The Hydraulic mean depth of a circular sewer running half full is $\underline{\hspace{2cm}}$ (CO3)
(c) The bacteria which can survive and grow both in the presence and absence of oxygen are called $\underline{\hspace{2cm}}$ (CO4)
(d) The pipe which is used to prevent 416behaviour action in drainage pipes is called $\underline{\hspace{2cm}}$ (CO5)
2. List any three objects of sewerage works. (CO3)
3. State three advantages of Trickling filter. (CO4)
4. What is the significance of BOD in sewage treatment? (CO4)
5. Define Soil pipe, waste pipe, vent pipe. (CO5)

PART- B

3 x 8 = 24 Marks

Instructions :

(i) Answer all questions

(ii) Each question carries EIGHT marks

(iii) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

6. (A) what is meant by water carriage system? List the merits and demerits of it. (CO3)
(OR)
(B) Explain the circular sewer with the help of a sketch and list any two merits and demerits. (CO3)
7. (A) Draw the flow diagram of conventional sewage treatment plant and indicate the main functions of each unit. (CO4)
(OR)
(B) What do you mean by Activated sludge process? Draw the flow diagram. (CO4)
8. (A) Sketch and Explain the working of a Septic tank. (CO4)
(OR)
(B) What is meant by composting? Explain the Bangalore method and Indore method of Composting. (CO5)

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MODEL QUESTION PAPER FOR BOARD DIPLOMA EXAMINATION, (C-23)

DCE—FIFTH SEMESTER EXAMINATION

ENVIRONMENTAL ENGINEERING(C-502)

Time:3 hours]

[TotalMarks:80

PART—A

3×10=30Marks

Instructions: (1)Answer all questions.
(2)Each question carries three marks.
(3)Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List any three factors affecting per capita demand. (CO1)
2. State the classification of sources of water (CO2)
3. Define Sedimentation. (CO2)
4. List the methods of distribution. (CO2)
5. Define Dry weather flow. (CO3)
6. Draw the sketch of drop manhole. (CO3)
7. List any three objects of treatment of sewage. (CO4)
8. Define the terms COD and BOD. (CO4)
9. What are the different methods of testing drains? (CO5)
10. What are the sources of air pollution? (CO5)

PART—B

5×10=50 marks

- 11) Explain the canal intake with a legible sketch (CO1)
- 12) Explain the construction and operation of slow sand filter (CO2)
- 13) Explain any two systems of water distribution with sketches. (CO2)
14. Sketch And explain a typical water supply connection to a building (CO2)
15. Explain types of sewerage systems and their suitability (CO3)
16. Explain the construction and working of a Man hole (CO3)
17. Explain construction and working of Trickling filter with a neat sketch. (CO4)
18. Explain method of sewage disposal on land and water. (CO4)