

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

SENV-310

M.Sc. (IIIrd Semester) Examination, 2021

ENVIRONMENTAL SCIENCE

Paper - ESCC-301

(Environmental Technology)

Time : 1½ Hours]

[Maximum Marks : 40

Section-A

(Marks : 1 × 10 = 10)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **1** mark.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer any *five* questions by selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries **3** marks.

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer any *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries **5** marks.

Section-A

1 each

1. Attempt all *ten* questions. Answers should not exceed **50** words in each question.

(i) What do you mean by Mixing Height ?

(ii) Write any *two* objectives of Air Quality Monitoring Programme.

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- (iii) Define Plume Behaviour.
- (iv) Write any *two* drawbacks of gravity settling chambers used for particulate matter control.
- (v) What is ESP ?
- (vi) Define Automobile Exhausts.
- (vii) What is Flocculation ?
- (viii) What do you mean by reverse osmosis ?
- (ix) Write *two* benefits of Biofertilizers.
- (x) Write any *two* methods of cleaning potable water.

Section-B

3 each

Unit-I

- 2. Write short notes on scope, purpose and objectives of Air Quality Monitoring Programme.
- 3. Write note on stack emission monitoring.
- 4. How can you calculate the effective stack height ?

Unit-II

- 5. Draw labelled diagramme of Cyclone used for control of particulate matter.
- 6. Write basic principle of fabric filters.
- 7. What are the measures used for mobile source emission control ?

Unit-III

- 8. Write short note on water quality standard.
- 9. Draw schematic diagram of water treatment procedure.
- 10. What is the composition of Biogas ? Write short notes on biogas plant.

Section–C

5 each

Unit–I

11. What is air pollution ? Write detailed notes on ambient air pollution monitoring instruments.

Or

12. Write notes on the following :
- (a) Lapse rate
 - (b) Stability conciliations

Unit–II

13. Write detailed notes on the following :
- (a) Gravity Settling Chambers
 - (b) ESP

Or

14. Write a note on mitigation of air pollution with special reference to Thermal Power Plant.

Unit–III

15. What are the roles of Environmental Biotechnology in improving environmental quality ? Discuss.

Or

16. Write notes on the following :
- (a) Vermiculture
 - (b) Biofertilizers