GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

(An Autonomous Institute of Government of Maharashtra)

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Name of Examination : **Summer 2021** - (Preview)

Course Code & Course Name : **CE355UX - Industrial Pollution And Control**

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Maximum Marks : **60**   Duration : **3 Hrs**

Edit   Print   View Answer Key   Close   **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. *All questions are compulsory.*
2. *Illustrate your answer with suitable figures/sketches wherever necessary.*
3. *Assume suitable additional data; if required.*
4. *Use of logarithmic table, drawing instruments and non programmable calculators is allowed.*
5. *Figures to the right indicate full marks.*

Attempt any two sub questions.

1) I)   What are the pollution effects of dairy industry wastewater?   [5]

II) What is the commonly recommended treatment technology for the wastewater of dairy industry?   [5]

III) What are the typical problems associated with treatment of dairy wastewater?   [5]

Attempt any two sub questions.

2) I)   What are the salient features of Environment Protection Act?   [5]

II) What is the importance of flow equilization?   [5]

III) Write a note of constitution of pollution control boards in India.   [5]

Attempt any two questions.

3) I)   What are the typical problems faced in treatment of pulp and paper industry wastewater?   [5]

II) Write a technical note on house keeping and its importance in industries.   [5]

III) Write a note on the concept of industrial ecology.   [5]

Attempt any two sub questions.

4) I)   What is the concept of water quality index?   [5]

II) What are ambient standards and exhaust standards?   [5]

III) Discuss the thermal inversion phenomenon.   [5]

Attempt all sub questions.

5) I)   Air pollution is coming out of a stack having physical height 40 m, at a rate of 160 g/s. the wind speed at the stack height is 6 m/s. calculate air pollution in the wind   [5]
direction at ground level at distance 500 m from the stack base. consider the plume rise as 20 m and atmospheric stability parameters (**sigma y and sigma z**) as 36 m and
18.5 m respectively. Use Gaussian dispersion model for point source without reflection.

II) Describe the procedure for stack height determination for maximum permissible ground level concentration of air pollution.   [5]

Attempt all sub questions.

6) I)   How the thermal power plant waste can be reused for various applications?   [5]

II) Write a technical note on composting of municipal solid waste.   [5]

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