

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fifth Semester B.Tech Degree Regular and Supplementary Examination December 2020

Course Code: CH301**Course Name: ENVIRONMENTAL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer any two full questions, each carries 15 marks.*

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| 1 | a) Explain precipitation processes in water treatment. | (7) |
| | b) What are the various constituents in wastewater and their effects? | (3) |
| | c) Explain any two methods for determining the total solids present in a given sample of wastewater. | (5) |
| 2 | a) What are the methods for treatment of boiler feed water treatment? Explain. | (7) |
| | b) Write a note on various physical characteristics of wastewater. | (8) |
| 3 | a) Explain with neat sketch, any three methods for desalination. | (7) |
| | b) Explain 'most probable number' and how will you determine the most probable number of bacteria in a given sample? | (8) |

PART B*Answer any two full questions, each carries 20 marks.*

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| 4 | a) Explain the working of grit chambers. What are the factors to be considered in the design of a grit chamber? | (6) |
| | b) Explain the mechanism of an anaerobic process. | (4) |
| | c) Describe any three methods for sludge thickening with neat figure. | (10) |
| 5 | a) With a neat sketch explain the working of a i) Clariflocculator ii) Trickling filter | (10) |
| | b) Explain various treatment methods for hazardous waste. | (5) |
| | c) Write a note on sludge lagooning. | (5) |
| 6 | a) With a neat sketch explain the working of upflow anaerobic sludge blanket reactor. Also compare anaerobic and aerobic process for wastewater treatment. | (10) |
| | b) Explain treatment of fertilizer industry waste with a neat sketch. | (10) |

PART C*Answer any two full questions, each carries 15 marks.*

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| 7 | a) What is meant by atmospheric dispersion and air pollution meteorology? | (3) |
| | b) What are primary and secondary air pollutants? Write a note on effects of air pollutants. | (5) |

- c) Describe the working of a settling chamber with a neat sketch. (7)
- 8 a) Explain the sources and characteristics of municipal sewage. (4)
- b) Write a note on sampling and analysis of air pollutants (3)
- c) Describe any two methods for gaseous emission control. (8)
- 9 a) Explain the global effects of air pollutants. (7)
- b) What are the effects of noise on human? Explain any three noise pollution control methods? (8)
