

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIFTH SEMESTER B.TECH DEGREE EXAMINATION(S), MAY 2019

Course Code: CE371

Course Name: ENVIRONMENT AND POLLUTION

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions; each carries 15 marks.

Marks

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| 1 | a) How do the carbon levels in the environment maintain a rough stability without human influence? | (5) |
| | b) What are the main causes for the increase in environmental pollution of today's world? | (5) |
| | c) Enlist the basic requirements for maintaining a healthy environment. | (5) |
| 2 | a) How do suspended particulate matters present in air affect human beings, plants and materials? | (5) |
| | b) What is photochemical smog? How it is formed and what are its impacts? | (5) |
| | c) How does the stack gases from a thermal power plant located on the sea coast behave during day and night time? | (5) |
| 3 | a) What is an ecosystem? What are its components? | (3) |
| | b) What is meant by biogeochemical cycling of materials? Give the various stages of nitrogen cycle. | (4) |
| | c) Enlist the different source correction methods used by industries to control air pollution | (4) |
| | d) Differentiate between (i) radiation inversion and subsidence inversion
(ii) primary air quality standard and secondary air quality standard | (4) |

PART B

Answer any two full questions; each carries 15 marks.

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| 4 | a) Synthetic organic compounds are considered as water pollutants. What are the adverse impacts of these compounds on aquatic ecosystem? | (4) |
| | b) Give the source and impact of the following heavy metals in aquatic ecosystem.
(i) lead (ii) cadmium and (iii) mercury | (6) |
| | c) What are waterborne diseases? Give any three causative agents with the diseases caused. | (5) |

- 5 a) Municipal solid waste management is becoming a challenge in many areas. (5)
Why?
- b) Give an account on the 5R principle in solid waste management (5)
- c) What is segregation of solid waste? What are the benefits gained through it? (5)
- 6 a) In what way the presence of iron and manganese affect the quality of water? (4)
- b) Give the drinking water standard as per BIS for (i) nitrate (ii) sulphate and (iii) turbidity. Also mention the ill effects due to these parameters when they are excess in drinking water. (3)
- c) What is “great Pacific garbage patch”? Give its causes and impacts (4)
- d) E-waste related toxic effects can be exacerbated throughout a person’s lifetime and across generations. How? (4)

PART C

Answer any two full questions; each carries 20 marks.

- 7 a) What are the direct and indirect effects on soil quality due to excessive and intensive irrigation practices? (7)
- b) Can urbanisation cause land degradation through climate changes? Justify your answer. (6)
- c) What is meant by organic farming? What are its advantages? (7)
- 8 a) Enlist the various non-industrial sources of noise with their typical noise levels. (7)
- b) What are weighting networks in sound level meters? Mention the different types and importance of each weighting network. (7)
- c) How noise is controlled at the source of generation? (6)
- 9 a) What is meant by soil acidification? How does it affect agricultural productivity and sustainable farming systems? (5)
- b) Mining and its subsequent activities have been found to degrade the land to a significant extent. Suggest suitable control measures for this. (5)
- c) What are the basic sound absorption technologies used for noise reduction in buildings? (5)
- d) What is meant by occupational hearing loss? How this is prevented? (5)
