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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
07 THRISSUR CLUSTER

SECOND SEMESTER M.TECH. DEGREE EXAMINATION APRIL 2018

Chemical Engineering

Process Control

07CH 6128 ENVIRONMENTAL ENGINEERING AND MANAGEMENT

Time : 3 hours

Max.Marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no.	Module 1	Marks
1a	What is meant by Flow equalisation? What is its importance	4
	Answer b or c	
b	The prototype detention time and overflow rate were calculated to be 44 min and 0.10 m/min respectively. Design a rectangular settling basin using these values for a flow rate of 18,000 m ³ /day	5
c	Analyse the factors influencing the performance of activated sludge process	5
Q.no.	Module 2	Marks
2a	Discuss the characteristics of domestic wastewater	4
	Answer b or c	
b	Common Effluent Treatment Plant (CETP) is an economic approach to treat the wastewater in an industrial area. Comment	5
c	Discuss the concept of zero discharge systems	5
Q.no.	Module 3	Marks
3a	Discuss the methods available for control of pollution from mobile sources	4
	Answer b or c	
b	Analyse the factors affecting the dispersion of air pollutants	5
c	Discuss the effect of noise pollution on human health. Also explain the methods available for controlling the noise pollution	5

Q.no.	Module 4	Marks
4a	What are the major pollutants from a brewery? Suggest the methods to control the same	4

Answer b or c

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| b | Discuss the characteristics of wastewater from a textile industry. What are issues generally faced in treating textile wastewater. Also suggest a treatment scheme for treating the same | 5 |
| c | Discuss the emissions from a petroleum refinery. How they are handled? | 5 |

Q.no.	Module 5	Marks
5a	What are the different classes of solid wastes? Also discuss the collection methods used for solid wastes	5

Answer b or c

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| b | Discuss the sources and impacts of solid wastes on man, material and environment | 7 |
| c | Discuss in detail the treatment techniques used for hazardous wastes | 7 |

Q.no.	Module 6	Marks
6a	What are the main stages in Environmental management system	5

Answer b or c

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| b | Discuss the factors to be considered while doing and Environmental Impact Assessment | 7 |
| c | What is meant by Environmental Audit? Discuss different types of EIA and benefits of them | 7 |