

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Regular/ Backlog), Nov-Dec 2017

B. Tech in chemical Engineering, Semester VII

Roll No.....

COURSE CODE: CHE 703

Time: 3 hours

Max. Marks: 100

COURSE TITLE: Industrial Pollution Abatement

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

Q.1A Objective type multiple choice questions (10 questions @ 1 mark) 10

- i. BOD of water sample is higher this indicate that
 - a- low concentration of dissolved oxygen
 - b- DO concentration is sufficient in sample
 - c- high concentration of dissolve oxygen
 - d- None
- ii. Sustainable development indicate that
 - a- holistic development of all
 - b- conserve natural resource
 - c- Both a & b
 - d- only industrial revolution
- iii. A hazardous waste can be a:
 - a- solid
 - b- gas
 - c- liquid
 - d- all of the above
- iv. Gaussian model use for the prediction of
 - a- Air pollutant
 - B- gaseous pollutant
 - c- liquid vapor pollutant
 - d- both a & b
- v. Biodegradable solid waste can be biologically converted into
 - a- organic compost
 - b- vermi compost
 - c- inorganic material
 - d- both a& b
- vi Landfilling is related to
 - a- solid waste management
 - b- a area where methane captured
 - c- leachate formation
 - d- all of the above
- vii ISO 14001 is:
 - a- A particularly harmful global warming gas
 - b-A European Union regulation on pollution abatement
 - c- A water quality regulation
 - d-An international standard setting out best practice for carrying out audits by companies of their environmental management systems and policies
- viii EA is related
 - a- define the quality of environment
 - b- environment tool for industries
 - c- deal the environmental compliance
 - d- all of the above
- Ix One of the most effective forms of hazardous waste disposal may be
 - a- landfills
 - b. deep-well injection

- c. incineration
 x Incineration of waste is
 a- reduce the volume of waste by 10%
 c- waste to energy
- d. none
 b- generate some toxic gases
 d- all of the above

Q.2	Short answer type questions (4 questions @ 2.5 marks)	10
1	Short note on Electrostatic precipitator (ESP)	
2	Classification of wastes by sources	
3	Global warming	
4	Flocculation process	
Q.3A	Discuss the various type of air pollutant and critical understanding submits for primary and secondary air pollutant.	05
Q.3B	Give critical short note on GHC also discuss the impact on global environment.	05
Q.4A	How the sustainable development helpful to protect the environment and future of human beings.	05
Q.4B	Discuss the anaerobic digester how this bio digester helpful to reduce the biodegradable solid waste.	05
Q.5A	Give short note on incinerator and give their importance in industries.	05
Q.5B	Discuss the various water pollutant how they affect the water quality	05
Q.6A	Short note on waste water treatment specially focus on coagulation and flocculation method .	05
Q.6B	Describe the waste to energy and how this method helpful to reduce the pollution	05
OR		
Q.6B	How air pollution affect the climate change and give your critical view on acid rain and their economical impact	05
Q.7A	How absorption method useful for removal of pollutant from emission discuss it mechanism.	05
Q.7B	Describe plume . Calculate the effective plume height.	05
OR		
Q.7B	Give brief note on EIA report with suitable example	05
Q.8A	Describe Gaussian probability model for determination of gaseous mixture dispersion from stack.	10
Q.9A	Discuss the important points of EMS model for environmental policies.	10
Q.9B	Give critical short note on landfill for solid waste management and how this method support to waste management.	10
OR		
Q.9B	Describes the principal and structure of ISO 14000 and how this system improve an environmental management systems and policies.	10