QP Code: RD21MSC081 | Reg. No | | | | | | | | | | | AR 21

GIET UNIVERSITY, GUNUPUR – 765022

M. Sc. (Third Semester) Examinations, December – 2022

20CHPE304 - Environmental and Analytical Chemistry

(Chemistry)

Time: 3 hrs | Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A **(2 x 10 = 20 Marks)**

Q.1. Answer ALL Questions	CO#	Blooms Level
a. What is isokinetic sampling? Write its working principle with suitable diagram.	CO1	K1
b. What is Global warming?	CO1	K1
c. What is alkalinity?	CO2	K1
d. How does polluted water responsible to disturb ecological balance?	CO2	K2
e. Define singlet and triplet state.	CO3	K1
f. Write any three structural requirements whose presence in a molecule may take it fluorescent?	CO3	K2
g. What is Radio Chromatography?	CO4	K1
h. Write any two uses of radio isotopes in medicines.	CO4	K2
i. What are the advantages of atomic absorption spectroscopy?	CO3	K2
j. What is Atomic absorption spectroscopy?	CO3	K1

PART – B **(10 x 5 = 50 Marks)**

Answer ***ANY FIVE*** questions	Marks	CO#	Blooms Level
2. a. Describe the methods used to control the emission of gaseous pollutants such as oxides of Sulphur and nitrogen.	6	CO1	K1
b. Write the principle of colorimetric analyser for automatic monitoring of Sulphur Dioxide with suitable diagram.	4	CO1	K1
3.a. Write the principle of automatic monitoring of Nitrogen oxides.	3	CO1	K1
b. What is ozone layer depletion? Describe its effects on human health, materials, food production and climate.	7	CO2	K2
4. a. Describe how Dissolved oxygen (DO), and Total Organic Carbon (TOC) can be determined.	6	CO2	K2
b. How will you determine the hardness of water?	4	CO2	K1
5.a. What are the major water pollutants? Describe sources of water pollution.	6	CO2	K2
b. Write notes on: (i)BOD (ii)COD	6	CO2	K1
6.a. How will you determine aspirin by phosphometry?	4	CO3	
b. Draw and explain Jablonski diagram for fluorescence and phosphorescence.	6	CO3	K2
7. Give the principle of radiometric titration. Explain any one radiometric titration with suitable example.	10	CO3	K1
8. a. Write about the applications of radio isotopes in physio-chemical problems.	6	CO4	K1
b. What is isotopic dilution?	4	CO4	K1

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