



# PRESIDENCY UNIVERSITY

BENGALURU

Roll No.																			
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## End - Term Examinations - MAY/ JUNE 2025

Date: 04-06-2025

Time: 01:00 pm – 04:00 pm

<b>School:</b> SOE	<b>Program:</b> B. Tech		
<b>Course Code :</b> CIV2027	<b>Course Name:</b> Environmental Pollution and Control		
<b>Semester:</b> IV	<b>Max Marks:</b> 100	<b>Weightage:</b> 50%	

CO - Levels	C01	C02	C03	C04	C05
<b>Marks</b>	14	52	34	-	-

### Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

### Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	What is secondary air pollutant? Give an example.	2 Marks	L1	C02
2.	What is PAN?	2 Marks	L1	C02
3.	Name two greenhouse gases.	2 Marks	L1	C02
4.	Name any two methods to remove gaseous pollutants from industrial stack air.	2 Marks	L1	C02
5.	Which is the instrument used for ambient air sampling? Give the flow rate of it.	2 Marks	L1	C02
6.	Define carbon credit.	2 Marks	L1	C02
7.	Differentiate infrasound and ultrasound	2 Marks	L1	C03
8.	Write the equation to calculate SPL.	2 Marks	L1	C03
9.	What is MLSS?	2 Marks	L1	C01
10.	What is skimming?	2 Marks	L1	C01

## Part B

### Answer the Questions.

**Total Marks 80M**

<b>11.</b>	<b>a.</b>	The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS) for six common air pollutants (also known as "criteria air pollutants"). Enlist the criteria air pollutants and explain the significant sources and effects of any four of it.	<b>10 Marks</b>	<b>L2</b>	<b>CO 2</b>
<b>Or</b>					
<b>12.</b>	<b>a.</b>	Temperature actually increases with altitude near the ground before it begins to decrease with altitude. This results in inversion with a very stable air column that traps pollution near the ground. Identify the inversion types, which occurs during night time and in the mountain region with figures.	<b>10 Marks</b>	<b>L2</b>	<b>CO 2</b>
<b>13.</b>	<b>a.</b>	Attached growth process is a biological treatment process of in waste water in which micro-organisms are attached to some inert medium and converts organic matters into gases and new cells. Describe the working mechanism with neat sketch.	<b>10 Marks</b>	<b>L2</b>	<b>CO 1</b>
<b>Or</b>					
<b>14.</b>	<b>a.</b>	Preliminary treatment of waste water consists of removal of floating material and also the heavy settleable inorganic solids. Enlist the preliminary treatment processes of waste water and explain any two of it with sketch.	<b>10 Marks</b>	<b>L2</b>	<b>CO 1</b>
<b>15.</b>	<b>a.</b>	Sound becomes undesirable when it disturbs the normal activities such as working, sleeping, and during conversations. Explain the environmental noise standards at day and night time for different areas as per Noise Pollution (Regulation and Control) Rules, 2000.	<b>10 Marks</b>	<b>L2</b>	<b>CO 3</b>
<b>Or</b>					
<b>16.</b>	<b>a.</b>	Sound becomes undesirable when it disturbs the normal activities such as working, sleeping, and during conversations. Explain the Properties and measurement of noise pollution.	<b>10 Marks</b>	<b>L2</b>	<b>CO 3</b>
<b>17.</b>	<b>a.</b>	In the move of clean energy fuel in 2017, the Indian government announced that it would increase the share of natural gas in its energy mix to 15% by 2030. As of September 2021, natural gas made up 6.5% of India's energy mix. "Natural gas is a clean fuel" Infer this statement by comparing with diesel fuel.	<b>10 Marks</b>	<b>L3</b>	<b>CO 2</b>
<b>Or</b>					

<b>18.</b>	<b>a.</b>	Global warming refers to the long-term increase in the Earth's average surface temperature leads to climate change Suggest the possible measures to reduce global warming and mitigate climate change.	<b>10 Marks</b>	<b>L3</b>	<b>CO 2</b>
<b>19.</b>	<b>a.</b>	In the move of clean energy fuel in 2017, the Indian government announced that it would increase the share of natural gas in its energy mix to 15% by 2030. As of September 2021, natural gas made up 6.5% of India's energy mix. "Natural gas is a clean fuel". justify this statement by comparing with diesel fuel and add a note on carbon credit.	<b>20 Marks</b>	<b>L3</b>	<b>CO 2</b>
<b>Or</b>					
<b>20.</b>	<b>a.</b>	The choice of air pollution control device to remove particulate matter from industrial stack air depends on characteristics of particulate matter, flow rate, collection efficiency and cost. Construct the working principle of the devices with diagram to remove even acidic gases and submicroscopic particles.	<b>20 Marks</b>	<b>L3</b>	<b>CO 2</b>
<b>21.</b>	<b>a.</b>	A noticeable way of reducing noise is to separate the sources of noise from noise sensitive uses. This is however often not practical in a compact and high-rise city Illustrate the noise control principles with examples.	<b>20 Marks</b>	<b>L3</b>	<b>CO 3</b>
<b>Or</b>					
<b>22.</b>	<b>a.</b>	World Health Organization stated that "Noise must be recognized as a major threat to human well-being". Illustrate the substantial sources and appropriate solutions with standard noise levels for day and night hours of different areas.	<b>20 Marks</b>	<b>L3</b>	<b>CO 3</b>