(10 Marks)

(12 Marks)

(10 Marks)

6

## Automotive Air Pollution and Control

Time: 3 hrs.

GAL ORE

Max. Marks: 100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

## PART - A

		171AL 11		
1	a.	Define the driving cycle. Explain the ECE used for the regulatory test with the help of a ne		
		sketch. (10 Marks)		
	b.	Explain the influence of actual traffic condition and maintenance of vehicles on Exhaust		
		Emission. (10 Marks)		
2	a.	Explain the nitric oxide formation in SI engine. (10 Marks)		
	b.	Explain the formation of unburnt hydrocarbons in SI engine and briefly discuss about the		
		factors influencing UBHC. (10 Marks)		
3	a.	Explain any five different measures in engine to control diesel emissions. (10 Marks)		
	b.	With neat sketch, explain the significance and working of positive crankcase ventilation.		
		(10 Marks)		
4	a.	Explain the effects of fuel properties on the pollution. (10 Marks)		
	b.	Discuss the effects of following of pollution control:		
		i) EGR ii) Fuel additives. (10 Marks)		
		$\underline{PART - B}$		
5	a.	Explain with neat sketch, the different types of Catalytic converters. (10 Marks)		

	b. Explain the Global warming and its effect.	(08 Marks)
7	<ul><li>a. List out the different gas sampling methods and explain any two in detail.</li><li>b. Explain the filter type of smoke meter.</li></ul>	(10 Marks) (10 Marks)
8	a. With a neat sketch, explain Orsat apparatus for Exhaust Gas Analysis.	(10 Marks)

b. Explain the thermal reactors used to treat exhaust gases, with a neat sketch.

Explain the working principle of NDIR Analyzer, with a neat sketch.

a. Explain the effect of air pollution on i) Animals ii) Plants.

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