

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- VII EXAMINATION-SUMMER 2023****Subject Code: 3170212****Date: 19/06/2023****Subject Name: Automotive Pollution and Control****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define air pollutants and list various air pollutants.	03
	(b) List out major reason for producing HC and NO _x in SI Engine vehicle.	04
	(c) Explain about EGR in CI Engine with neat sketch.	07
Q.2	(a) Write short note on Indian Emission Standards	03
	(b) Explain positive crankcase ventilation system	04
	(c) Write short note on catalytic converter.	07
	OR	
	(c) Write short note on general converter.	07
Q.3	(a) Write Short note on- Charcoal Canister.	03
	(b) Explain the Diesel smoke meter.	04
	(c) Explain Encapsulation technique for noise reduction in Automobile	07
	OR	
Q.3	(a) List out remedies for reducing concentration of NO _x .	03
	(b) Write the precaution for measurement in diesel smoke meter.	04
	(c) Explain working of HCCI Engine	07
Q.4	(a) Explain the operation of fuel evaporative emission control system	03
	(b) Write the concept s about HC and causes of high HC.	04
	(c) Explain about SCR Method	07
	OR	
Q.4	(a) Explain quenching zone.	03
	(b) Explain the theoretical air-fuel ratio.	04
	(c) Explain working of Chemiluminescent Analyzer.	07
Q.5	(a) How O ₂ sensor control the Air-fuel ratio in the MPFI system.	03
	(b) Write short note on relationship between driving condition and exhaust gases.	04
	(c) Write the necessity and operation of High-Altitude Compensation (HAC) system.	07
	OR	
Q.5	(a) Write the method of measuring of CO and CO ₂ concentration.	03
	(b) Explain the air injection system with neat sketch.	04
	(c) List the name of Smoke Controlling Method & explain anyone.	07
