

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3170212****Date: 01-06-2024****Subject Name: Automotive Pollution and Control****Time: 02:30 PM TO 05:00 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) Explain working principle of Exhaust Gas Recirculation system.	03
	(b) Give the definition of air pollutants and list various air pollutants.	04
	(c) Write about vehicle emission standards followed in India.	07
Q.2	(a) Draw the sketch of earth's atmosphere and explain air pollutants harmful effects.	03
	(b) What is blow by gas? What are its undesirable effects?	04
	(c) Explain Positive Crank case ventilation system.	07
	OR	
	(c) Write short note on general converter.	07
Q.3	(a) Explain formation of HC.	03
	(b) Explain the theoretical air-fuel ratio.	04
	(c) Write the advantages and disadvantages of CNG fuels.	07
	OR	
Q.3	(a) Explain air suction system.	03
	(b) Explain the air injection system with neat sketch.	04
	(c) Explain encapsulation technique for noise reduction.	07
Q.4	(a) Explain formation of CO.	03
	(b) How to reduce aerodynamic noise?	04
	(c) Write short note on catalytic converter.	07
	OR	
Q.4	(a) Explain the operation of fuel evaporative emission control system.	03
	(b) How octane number affects SI engine emission?	04
	(c) Explain silencer design for vehicle.	07
Q.5	(a) Explain Indian driving cycle.	03
	(b) Explain working principle of fuel cells with neat sketch.	04
	(c) Explain Cold Mixture Heater system.	07
	OR	
Q.5	(a) Explain gas chromatography.	03
	(b) Write short note on relationship between driving condition and exhaust gases.	04
	(c) Explain use of Chemiluminescent Analyzer (CLA).	07
