

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 01

B.Tech. (Sem. – 4th)
AUTOMOTIVE POLLUTION AND CONTROL SYSTEMS
SUBJECT CODE : AE - 208
Paper ID : [A0712]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A**Q1)****(10 × 2 = 20)**

- a) Name the main pollutants in the engine exhaust.
- b) What is the function of a catalyst?
- c) What is a three way converter?
- d) What are the effects of automotive pollution?
- e) What is the function of EGR?
- f) Which catalyst is employed for oxidizing HC and CO?
- g) What do you understand by fumigation?
- h) What is a NDIR analyzer?
- i) What is the effect of ignition timing on exhaust emission?
- j) Name the methods of emission measurement.

Section - B**(4 × 5 = 20)****Q2)** How HC and CO is formed in S.I. engine? Discuss.**Q3)** How proper design of combustion chamber helps to reduce exhaust emissions? Discuss.**Q4)** Discuss the purpose of installing thermal control valve in the EGR system.**Q5)** Explain the working of analyzer for NOx.**Q6)** What is a catalytic converter and how it works? Explain.**Section - C****(2 × 10 = 20)****Q7)** Discuss the PCV system of emission control in detail.**Q8)** Discuss various changes in the design of fuel supply system of engine for controlling automotive pollution.**Q9)** Write notes on :

- (a) Smoke meter.
- (b) Indian emission standards.

