

**24414**

**B. Tech 6th Semester (AUE)  
Examination – May, 2018**

**AUTOMOTIVE POLLUTION AND CONTROL**

**Paper : AUE-308-F**

Time : Three Hours ]

[ Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

**Note :** Question No. 1 is *compulsory* and attempt *one* question from each Section.

1. (a) What is meant by Global Warming ? 5
- (b) How engine combustion can be measured ? 5
- (c) Give the drawback of catalytic converter system. 5
- (d) How the humidity effects  $\text{No}_x$  formation ? 5

## SECTION - A

2. Explain the effects of design and operating variables on unburned hydrocarbon emission in an SI engine. 20
3. Explain in detail the transient operation of petrol and diesel engines and also write down the effects of it on emission. 20

## SECTION - B

4. Explain the effect of spray formation, combustion and emission formation in diesel engines. 20
5. What are blue, white and black smokes in diesel engines ? Describe the mechanism of black smoke formation. 20

## SECTION - C

6. Explain the principle, construction and efficiency of 3-way catalytic converter for an SI Engine. 20
7. Discuss the engine design modifications required for the control of unburned hydrocarbon emission. 20

## SECTION - D

8. Discuss the principle construction and working of light extinction type smoke meter. Also indicate its scale and versatility. 20
9. Write short notes on : 20
- (a) Flame ionization detectors.
  - (b) Use of unleaded petrol.
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