3. Explain the following with taking suitable example :
   (a) Thevenin Theorem 8
   (b) Norton Theorem 7

Section-B

4. (a) What do you mean by Transformer ? What are the different types of transformers ? Explain the working of each in detail. 7
   (b) What do you mean by regulation ? How it is useful in transformer testing and calculating its efficiency ? Explain. 8

5. Discuss about the following :
   (a) Power measurement by Two Wattmeter Method 5
   (b) Auto Transformer 5
   (c) Voltage and Current relations in Star Connection 5

Section-C

6. How the generation of rotating magnetic field works ? Explain the construction and working of three-phase induction motor in detail with suitable diagrams. Also describe the different applications of three-phase induction motor. 15

7. (a) Describe the relationship between torque and speed in DC Motor. 8
   (b) Explain the construction and working of synchronous generators in detail. 7

Section-D

8. Differentiate the following :
   (a) Watt meter and Energy meter 8
   (b) Moving iron Type and Moving Coil Types 7

9. Explain the following detail :
   (a) Induction type Voltmeter 5
   (b) SFU and MCB 5
   (c) ELCB and MCCB 5

Roll No. .....

24414

B. Tech. 6th Semester (AUE) Examination – May, 2019

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 : Attempt ***five*** questions in all. Question number **1** is ***compulsory*** and attempt at least ***one*** question from each Section.

1. Explain in brief the following : 2.5 × 8 = 20

(a) Difference between CI and SI engine.

(b) NO formation in SI engines.

(c) Smoke emission in diesel engines.