	<u>Unean</u>
Name :	A
Roll No.:	An Alexande O'S security and Excellent
Invigilator's Signature :	

CS/M.Tech (AUE)/SEM-1/MAE-104/2012-13

2012 ADVANCED AUTOMOTIVE ELECTRONICS

Time Allotted: 3 Hours Full Marks: 70

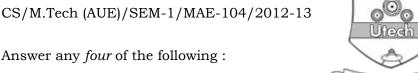
The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer Question No. 1 and any four from the rest.

- 1. Answer any seven questions of the following: $7 \times 2 = 14$
 - a) What do you mean by feed back?
 - b) What do you mean by closed loop control?
 - c) What do you mean by DAS?
 - d) What do you mean by transducer?
 - e) What do you mean by Inverse Transducer?
 - f) What do you mean by Knock sensor?
 - g) What do you mean by Speed sensor?
 - h) What do you mean by central locking?
 - i) What do you mean by sun visor?
 - j) What do you mean by ABS?
 - k) What do you mean by MPFI?

40330 [Turn over



- What are the advantages of Electrical transducer? How the 2. transducers are classified explain with example. Draw the
 - block diagram of a DAS and explain its operation. 4 + 5 + 5
- 3. How many types of feedback are there? What do you mean by loop gain? Find out the feedback gain with the help of a suitable block diagram. What are the advantages of feed back? 2 + 2 + 6 + 4
- 4. Write short note on any two:

 $2 \times 7 = 14$

- Oxygen Sensor.
- b) Objectives of DAS.
- Flashing indicator. c)
- 5. How many types of fuel injection systems are there? Draw the control layout of the petrol injection system and explain 7 + 7its operation.
- 6. Draw the operational diagram of electronic ignition system and explain its operation. Draw the pulse generator circuit and explain its operation. What are the advantages of electronic control ignition advance? 5 + 5 + 4
- Draw the circuit diagram of an Electric horn and explain its operation. Draw the operational diagram of a trafficator and explain its operation. Explain the operation of oil pressure warning light. 5 + 5 + 4
- 8. Draw the simple operational diagram of windscreen wiper and explain its operation. What do you mean by traction 6 + 4 + 4control system? Explain the operation of ABS?

40330 2