

# **GOVERNMENT ENGINEERING COLLEGE, GANDHINAGAR**

Nr. Animal Vaccine Institute, Sector-28, Gandhinagar - 382 028

## **IC DEPARTMENT**

### **Laboratory Visit Report**

#### **A. Date & Location**

<b>Date of Visit:</b> 13/03/2020	<b>Location of Visit:</b> Automobile department, LD college of engineering, Gandhinagar
<b>Objectives of the field visit:</b> <ol style="list-style-type: none"><li>1. Basic fundamental of Automobile engineering</li><li>2. Experiments and demonstration on setups</li></ol>	<b>Methodology:</b> <ul style="list-style-type: none"><li>• Experimental &amp; demonstration of setups</li><li>• Focus Group Discussion</li></ul>

#### **B. Visit coordinators, GEC-Gandhinagar**

<b>Name</b>	<b>Organization</b>
Prof. Ravindra S. Rana	GEC Gandhinagar
Prof. Rajesh L. Zadafiya	GEC Gandhinagar

#### **C. Faculty representatives of Automobile department, LDCE**

- Prof. Suley Patel
- Prof. Shyam Dabhi

### **Main Findings**

#### **Objective 1: Basic fundamental of Automobile engineering:**

- Theoretically working of oxygen sensor, MAP (Manifold absolute pressure) Sensor, MAF(Manifold air flow) sensor, temperature sensor, ECU(electronic control unit), were explained by the automobile departmental faculty, Prof. Suley Patel and Prof. Shyam Dabhi.
- Prototype working model of ECU has been observed and explained diligently. The controller to which (Arduino UNO & MINI) has been examined and explained thoroughly.

## **Objective 2: Experiments and demonstration on setups:**

1. Data acquisition of 'Naturally aspirated diesel engine': At workshop the demonstration of diesel engine with live parameter measurement system has been performed. The various parameters of diesel engine for ex. rpm, torque, pressure, temperature etc. have been measured and graphical representation of same have been displayed.  
This engine was under research work for better combustion output by taking 80% diesel and 20% ethanol. These sensor were connected with engine through computer interface where data can be view for live visualization and can be saved for further analysis. The fuel of engine can be changed after some necessary arrangements.
2. Demonstration on Hyundai i10 car: Left hand drive Hyundai i10 car has been examined. The circuitry and various part of engine have been explained and demonstrated. The dedicated car scanner has been connected to the car and various inputs from the system have been observed. An ECU of that system have been observed which was located under the steering wheel of the car.

### **D. Summarize Conclusions:**

The estimated goals, objective 1 and 2 of the visit have been achieved. The visit was very informative for students and will be quite useful for their academic as well as their carrier path. A copy of list of present students has been attached herewith.

### **E. Attachments:**

1. A copy of Student's attendance report
2. Photographs of lab visit

AI Visit in LD

13/3/20

Time 11:30 to 3:00

- 1) Aman C. Solunski - 160130117111 - A.C. Solunski
- 2) Vishal G. Prajapati - 150130117097 - vishal P.
- 3) Avanish M. Prajapati - 160130117086 - Avanish
- 4) Sareem Loxhandwala - 160130117039 - Sareem
- 5) VISHWA PATEL - 160130117081 - Vishwa Patel
- 6) Anitee Patel - 160130117063 - Anitee Patel
- 7) Parmar zulek - 160130117060 - Parmar
- 8) Ravi Nandan Ray - 160130117098 - Ravi
- 9) Karp Patel - 160130117034 - Karp
- 10) Naibhuv Patel - 150130117083 - Naibhuv
- 11) Nizel Patel - 160130117078 - Nizel
- 12) Jinish Patel - 160130117072 - J.S. Patel

**Photographs of Automobile department LAB Visit, LD College of engineering**







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**THANK YOU**