CMR
EXPLORE TO INVENT

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
Kandlakoya (V), Medchal Road, Hyderabad -501401.

Date:25/05/2015

To
IQAC,
CMRCET,
Kandlakoya (V),
Medchal Road,
Hyderabad-501401.

Respected sir,

Sub: Annual report of the SAEINDIA COLLEGEIATE CLUB CMRCET for the A.Y 2014-15

Following is the brief information of programs conducted by the SAEINDIA COLLEGEIATE CLUB CMRCET for the A.Y 2014-15.

1.Conducted a one-day seminar on current trends in automobiles – Basically, in this seminar we discussed on current trends in automobiles like Automatic Manual Transmission system, Air Bearing, Automatic braking System, Six Stroke Engine, Aerodynamics in car.

Automated manual transmission is also known as semi-automatic transmission. It is a combination of manual and automatic transmission, where the gear shift is prompted by the driver and accomplished by the actuator. Using an AMT in the vehicle, allows gear shift without using a clutch. The AMT consists of two key components: hydraulic actuator system and electronic control unit. The electronic control unit facilitates the engagement and disengagement of the clutch while gear shifting. Any manual transmission can be converted into an AMT by installing some components on it.

Air bearings (also known as **aerostatic** or **aerodynamic bearings**) are bearings that use a thin film of pressurized gas to provide a low friction load-bearing interface between surfaces. The two surfaces do not touch, thus avoiding the traditional bearing-related problems of friction, wear, particulates, and lubricant handling, and offer distinct advantages in precision positioning, such as lacking backlash and static friction, as well as in high-speed applications.

An **automatic braking system** is an important part of safety technology for automobiles. ...
These **systems** combine sensors, such as radar, video, infrared or ultrasonic to scan for possible objects in front of the vehicle, and then use **brake** control to prevent collision if the object is, in fact, detected.

The term **six-stroke engine** has been applied to a number of alternative internal combustion engine designs that attempt to improve on traditional two-stroke and four-stroke engines. Claimed advantages may include increased fuel efficiency reduced mechanical complexity and/or reduced emissions. These engines can be divided into two groups based on the number of pistons that contribute to the six strokes. **Automotive aerodynamics** is the study of the aerodynamics of road vehicles. Its main goals are reducing drag and wind noise, minimizing noise emission, and preventing undesired lift forces and other causes of aerodynamic instability at high speeds. Air is also considered a fluid in this case. For some classes of racing vehicles, it may also be important to produce downforce to improve traction and thus cornering abilities.

Outcomes of the event are:

1. The students will gain knowledge in current changes in automobiles. This helps them Immensely during placement and can also bring laurels to the institution through various national and international automobile events.

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