



Enrolment No. \_\_\_\_\_

**HASMUKH GOSWAMI COLLEGE OF ENGINEERING, VAHELAL**  
**MID SEMESTER EXAMINATION, SEPTEMBER-2016**

**Subject Code: 2150202**  
**Subject Name: Automobile System**  
**Time: 10:00 AM TO 10:50 AM**

**Date: 24/09/2016**  
**Sem: 5<sup>TH</sup>**  
**Total Marks: 20**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**QUE.1 (A) Write the function of Stub Axle in Steering System. 3**

**(B) Define King-pin inclination, Scrub radius & Slip Angle. 3**

**QUE.2 (A) Explain requirement of Slip joint in propeller shaft. 3**

**(B) Explain working of Hydraulic shock-absorber in suspension system. 4**

**OR**

**(B) Explain Double-wishbone type suspension system. 4**

**QUE.3 (A) Explain necessity of brake-proportioning valve in brake circuit. 3**

**(B) Explain Recirculating ball type steering gearbox with neat sketch. 4**

**OR**

**(A) Draw Layout of front wheel front drive vehicle system. 3**

**(B) Explain Servo brake system. 4**

\*\*\*\*\* ALL THE BEST \*\*\*\*\*