



AJEENKYA

D Y PATIL UNIVERSITY

End Term Examinations (May 2019)

School: School of Engineering

Program: MTECH APE

Course: Automotive System Engineering

Course Code: APE508

Semester: II

Max Marks: 50

Duration (mins): 90

- Note: 1. Solve any five questions
2. Figures to the right indicate full marks.

- Q 1. What are Basics requirements of vehicle suspension? Explain Wheel hop, Wobble, Shimmy in brief. (10)
- Q 2. Derive generalize equation for axial loading with neat sketch. (10)
- Q 3. Explain the following terms,
i) Cornering force
ii) Slip angle
iii) Power consumed by tyre. (10)
- Q 4. Explain Neutral steer point, Static margin, over and under steer as vehicle steering characteristics. (10)
- Q 5. Write short note on steering geometry. And why Ackerman steering geometry is used in vehicle designing. (10)
- Q 6. Write a short note on Natural frequency of damping in yaw. What is be the Frequency response at the time of yaw? (10)