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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

V SEMESTER B.TECH. (AUTOMOBILE ENGINEERING)

END SEMESTER EXAMINATIONS, DEC 2017

SUBJECT: TWO AND THREE WHEELED VEHICLE [AAE – 4022]

REVISED CREDIT SYSTEM

(27/12/2017)

Time: 03 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.

- 1A. Enumerate how the 2 wheelers are classified into different categories. (03)
- 1B. Describe the features of Endure bike. (04)
- 1C. Explain the features of Trellis type of 2-wheeler frame (03)
- 2A. Mention the parameter which affects heat transfer in air cooling system. (02)
- 2B. Explain the working principle of mist lubrication system (03)
- 2C. List the types of fuel supply system and explain the method which is suitable for 2-wheeler. (05)
- 3A. What is meant by constant velocity joint. Mention its types. (02)
- 3B. Explain the working principle of screw type clutch release mechanism (04)
- 3C. Describe the trunnion type gear locking mechanism (04)

- 4A.** Differentiate between sprung and un-sprung mass of 2-wheeler. **(02)**
- 4B.** Explicate the effect of trail on steering system of 2-wheeler **(03)**
- 4C.** With a neat sketch, explain the self-adjuster type of disc brake. **(05)**
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- 5A.** List the merits of 2-wheeler's dynamics. **(02)**
- 5B.** Explain the blind spot area for a 2-wheeler **(04)**
- 5C.** Name the different road hazards coming across while riding a 2-wheeler. **(04)**