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**Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020**  
**Two and Three Wheeled Vehicles**

Time: 3 hrs.

Max. Marks:100

**Note:** Answer any FIVE full questions, selecting atleast TWO questions from each part.

**PART – A**

- 1 a. Compare the relative advantages and disadvantages of four stroke and two stroke engines. (10 Marks)  
 b. With neat diagram, explain valve timing diagram of four stroke and two stroke SI engine. (10 Marks)
- 2 a. Explain SU carburetion, with neat sketch. (06 Marks)  
 b. With neat sketch, explain Wet Sump lubrication system. (06 Marks)  
 c. Compare the merits and demerits of air and water cooling systems. (08 Marks)
- 3 a. Explain Single plate clutch, with neat diagram, where and why do we use multiple clutches. (12 Marks)  
 b. Describe the working of sliding mesh gearbox, with neat sketch. (08 Marks)
- 4 a. Mention different types of two wheeler frames. Explain diamond frame and cradle frame with neat sketch. (10 Marks)  
 b. With neat sketch, explain shock absorber working principle and its construction. (10 Marks)

**PART – B**

- 5 a. Describe construction and working of disc brakes. Compare them with the conventional drum type brakes. (10 Marks)  
 b. Explain disc wheel and light alloy cast wheel, with neat diagram. (10 Marks)
- 6 a. Explain battery ignition system, with neat sketch. (10 Marks)  
 b. With neat diagram, explain working of spark plug. (10 Marks)
- 7 a. Differentiate between motor cycles, scooters and mopeds. (12 Marks)  
 b. Explain Front mounted and Rear mounted engine types. (08 Marks)
- 8 a. Explain different types of two wheeler maintenance. (12 Marks)  
 b. Explain Decarburizing procedure of an engine. (08 Marks)

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