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10AU752

**Seventh Semester B.E. Degree Examination, Dec.2017/Jan. 2018**  
**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. Write the advantages and disadvantages of 2 – stroke engines and 4 – stroke engines. (08 Marks)  
b. Sketch and explain the various arrangements of four cylinders for motorcycle engines. (12 Marks)
- 2 a. Sketch and explain the construction and working of venturi – slide type carburetor. (10 Marks)  
b. Explain any two types of engine lubrication system. (10 Marks)
- 3 a. What type of the clutch is used in a auto-riksha? Describe the construction and operation, with neat sketch. (10 Marks)  
b. Describe the working of synchromesh gear box, with the help of a neat sketch. (10 Marks)
- 4 a. Draw any three types of motorcycle frames. Mention their relative merits and limitations. (12 Marks)  
b. Sketch and explain working of a telescopic shock absorber. (08 Marks)

**PART – B**

- 5 a. Enumerate the merits and demerits of disc and drum brakes. (08 Marks)  
b. How wheels and tyres are designated? (04 Marks)  
c. Sketch and explain disc brake system of a two wheeler. (08 Marks)
- 6 a. Explain CDI system with neat sketch and enumerate the advantages. (10 Marks)  
b. Explain the construction of a spark plug, with a neat sketch. (10 Marks)
- 7 a. Compare the motor cycles with a scotter, in relation to its construction, power plant, transmission controls and overall performance. (10 Marks)  
b. Discuss the advantages and disadvantages of frame construction with respect to engine position in three wheelers (Auto rikshaws). (10 Marks)
- 8 a. What are the periodic inspection checks and how are they performed? (10 Marks)  
b. Write short notes on :  
i) Lubrication charts ii) Safety precautions. (10 Marks)

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