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10AU752

**Seventh Semester B.E. Degree Examination, Dec.2015/Jan.2016**

**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. What are the advantages and disadvantages of two stroke engines over four stroke engines used for two wheeler? (10 Marks)
  - b. What is meant by valve timing diagram? Draw the valve timing diagram for a four stroke petrol engine and explain the same. (10 Marks)
- 2
  - a. Sketch and explain the construction of a solex carburetor. (10 Marks)
  - b. What are the different types of cooling systems used for two wheeler? Give any three reasons for having air cooling system in most of the motor cycle. (06 Marks)
  - c. Write a note on Grades of lubricating oil. (04 Marks)
- 3
  - a. With sketch, explain the clutch release mechanism of a motor cycle. (06 Marks)
  - b. Differentiate between sliding mesh and constant mesh gear transmission. Explain the working of a constant mesh gear box with sketch. (10 Marks)
  - c. Write a note on shaft drives for motor cycles. (04 Marks)
- 4
  - a. Explain the requirements for constructing a frame for two wheeled vehicles. (05 Marks)
  - b. What is the necessity of shock absorber? Explain its construction and working. (10 Marks)
  - c. Write a note on panel meters. (05 Marks)

**PART - B**

- 5
  - a. Draw a layout of braking system of a motor cycle. Explain how braking can be done. (08 Marks)
  - b. Mention the types of wheels for motor cycle. Illustrate with sketches construction of spoke wheel. (08 Marks)
  - c. Briefly explain how tyre and wheel are specified. (04 Marks)
- 6
  - a. What is Spark Plug? Discuss the construction, operation and maintenance of spark plug. (10 Marks)
  - b. Draw a wiring diagram for lighting system of a motor cycle and explain the parts. (06 Marks)
  - c. Write a note on types of ignition systems. (04 Marks)
- 7
  - a. Discuss the salient features of following two wheelers :
    - i) Hero Splendor
    - ii) Honda Activa. (10 Marks)
  - b. Mention any two types of Indian make three wheeled vehicles. Write the advantages of having Front mounted engine and rear mounted engine for three wheeled vehicles. Also mention disadvantages of three wheeler. (10 Marks)
- 8
  - a. Write the complete process of periodic maintenance of motor cycle. (10 Marks)
  - b. Write brief note on :
    - i) Decarburizing procedure
    - ii) Lubrication charts. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.