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10ME844

Eighth Semester B.E. Degree Examination, June/July 2019

Automotive Engineering

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

PART – A

1. a. Explain the various methods of cylinder arrangements used in multicylinder engines. (08 Marks)
b. What are the various methods of engine cooling? Explain with sketches. (12 Marks)
2. a. Explain Octane number and Cetane number. (08 Marks)
b. Sketch and explain Zenith Carburetors. (12 Marks)
3. a. Explain with neat sketches, types of superchargers. (10 Marks)
b. Compare Turbochargers with mechanical superchargers. (10 Marks)
4. a. Explain "Battery coil ignition system" for four cylinder engine. (10 Marks)
b. Explain with sketch vacuum advance mechanism. (10 Marks)

PART – B

5. a. With neat sketch, explain single plate clutch. (10 Marks)
b. With neat sketch, explain working of "synchromesh gear box". (10 Marks)
6. a. Define following and explain their effects on steering:
i) Camber
ii) King pin inclination
iii) Castor
iv) Toe in and Toe out (08 Marks)
b. With a neat sketch explain Hotch-Kiss drive. (12 Marks)
7. a. Explain with neat sketch, "laminated springs". (08 Marks)
b. State advantages and disadvantages of hydraulic brake over mechanical brake. (06 Marks)
c. Draw the neat sketch of "Master Cylinder". (06 Marks)
8. a. Explain with neat sketch "Exhaust Gas Recirculation" system. (10 Marks)
b. Explain the sources of automotive exhaust gas emission. (05 Marks)
c. Draw neat sketch of "Positive Crank Ventilation System". (05 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.