

**IV SEMESTER B.TECH (MECHANICAL/IP ENGG.) END SEMESTER
EXAMINATIONS, JUNE 2017****SUBJECT: AUTOMOBILE ENGINEERING [MME 2204]****REVISED CREDIT SYSTEM**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.

- 1A.** List the various items supported on the cylinder block. **02**
- 1B.** With a neat sketch, explain the valve operating mechanism used for an overhead valve engine. **03**
- 1C.** With suitable sketches, explain the various provisions provided on the carburetor to overcome starting difficulties. **03**
- 1D.** List down the requirements of a suitable ignition system. **02**
- 2A.** List the advantages and limitations of Air cooling. **02**
- 2B.** With a sketch, explain the wet sump lubrication system. **04**
- 2C.** With a neat sketch, explain the working of a semi-centrifugal clutch **04**
- 3A.** With the help of sketch, explain the synchromesh mechanism used in automobile gear boxes. **04**
- 3B.** List the functions of a differential used for transmission in an automobile. **02**
- 3C.** Distinguish clearly between a tubed and tubeless tyre. **04**
- 4A.** Explain the "Rack & Pinion" steering system with suitable sketch. **03**
- 4B.** Explain the following terms in detail.

- a) Camber
- b) Caster **03**

- 4C.** What do you mean by a torsion bar? Where it is used. What function does it perform in an automobile? **04**

- 5A.** Sketch and explain Wish bone type of suspension in automobiles. **04**

- 5B.** How brakes are classified into? Give detailed classification. **02**

- 5C.** How does the disc brake work? Explain with a suitable sketch. **04**