



## 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.

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