

Code: ME8T3B

**IV B.Tech - II Semester –Regular / Supplementary Examinations
July - 2021**

**AUTOMOBILE ENGINEERING
(MECHANICAL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

- a) What do you mean by four wheel drive?
- b) What is splash lubrication?
- c) Why is the carburetor not necessary in CI engines?
- d) State the advantages of air cooling system over Water cooling system.
- e) Explain the concept of Epi-cyclic gear box with a line diagram.
- f) What is Torsion bar?
- g) What is King pin inclination?
- h) State the advantages of hydraulic brake system over Mechanical braking.
- i) What is the function of Bendix drive?
- j) Keeping the pollution in view, list out the different alternative fuels that can be used for automobiles.
- k) Draw a line diagram to explain the function of a clutch.

PART – B

Answer any **THREE** questions. All questions carry equal marks. 3 x 16 = 48 M

2. a) Explain and compare turbo charging and super charging with their advantages and disadvantages. 8 M

b) Explain the procedure of decarburization of a four cylinder engine and why is it needed. 8 M

3. a) Explain different circuits of a carburetor. 8 M

b) Draw a line diagram of battery ignition system and explain all the parts with their functions. 8 M

4. a) Explain the working of a centrifugal clutch with a neat diagram and state the advantages and disadvantages of it. 8 M

b) Explain the working of a shock absorber with a neat sketch. 8 M

5. a) Explain the Davis steering mechanism with a neat sketch. 8 M

b) What is Tandem master cylinder assembly and what are the advantages of it over ordinary master cylinder? 8 M

6. a) What are the functions of the following?

8 M

- i) Starter motor
- ii) Solenoid switch
- iii) Wiper
- iv) Temperature gauge

b) Justify the statement “Automobile pollution can be controlled and various measures are being taken”

8 M