



Regulation-R17

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 1E5CE

B.Tech III Year I Semester Regular Examinations, Nov/Dec 2019

AUTOMOBILE ENGINEERING

Mechanical Engineering

Maximum Marks: 70

Date: 04.12.2019 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 What is a TDI system
- 2 Write the requirements of diesel injection systems
- 3 Briefly write the functions of an ignition system
- 4 Write about antifreeze solutions.
- 5 What do you mean by fluid flywheel?
- 6 What is the function of overdrive torque converter?
- 7 What are the basic characteristics of a brake fluid?
- 8 Define camber and king pin inclination.
- 9 What is the basic function of a canister in evaporative emission control systems?
- 10 Write the demerits of Hydrogen as a fuel for IC Engines.

Part-B

Answer All the following questions.

(10M X 5=50Marks)

- 11 Describe the construction and working of a fuel feed pump used in a diesel engine 10M
- OR
- 12 Explain the different types of nozzles with neat sketches. 10M
- 13 Describe the construction and working of a rotating armature type magneto system 10M
- OR
- 14 Explain the working of thermo-syphon cooling system. 10M
- 15 Explain rigid axle and independent suspension system. Discuss their applications 10M
- OR
- 16 Write about torsion bar? What is the principle of differential? 10M

- 17 Explain hydraulic brake system with neat sketch and Write a short note on Davis steering mechanism. 10M
- OR
- 18 Explain the working of a tandem master cylinder. Give its merits and demerits 10M
- 19 Explain the emission standards for pollution control. Describe Euro-IV norms for passenger cars 10M
- OR
- 20 What are the main pollutants from the engine exhaust and mention their effects on living organisms? 10M

Clear

MECT