R18 Regulation

Subject code: 2P5CD

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech V Semester Regular/Supplementary Examinations, December 2021

AUTOMOBILE ENGINEERING

(Mechanical Engineering)

Maximum Marks: 70 ***Date:07.01.2021*** 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 which carries 10M.
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 are the types of cross-sectional frames used in automobiles?
2 List any four IC engine components and the material they are made of.
3 Mention the two types of electronic ignition systems.
4 What are the requirements of a good cooling system in automobiles?
5 Give the functions of clutch in an automobile.
6 State the functions of suspension systems.
7 Mention the significance of any two steering geometry parameters.
8 List the requirements of a brake fluid.
9 What are the advantages of multi point fuel injection?
10 Differentiate between bio-fuel and bio-diesel.

Part-B

Answer All the following questions. (5X10M=50Marks)

11 Describe the chassis layout in front engine, front drive type vehicle with sketches. (10M)

OR

12 Discuss about splash and pressure lubrication systems in automobiles. (10M)
13 Explain the magneto coil ignition system with a neat sketch. (10M)

OR

14 Describe the functions of various components of an automobile electrical system. (10M)
15 With the help of a neat diagram, explain the construction and working of a telescopic type of shock absorber. (10M)

OR

16 Describe the functions of various components used in Hotchkiss drive configuration by including a simple layout. (10M)
17 Explain the working of a pneumatic braking system with a neat sketch. (10M)

OR

18 Discuss the working method of steering linkage system in detail, with suitable sketches. (10M)
19 With neat sketches, explain multipoint fuel injection and common rail diesel injection. Highlight the major differences between the two. (10M)

OR

20 Discuss the merits, demerits, performance and emission characteristics of LPG as a fuel for IC engines. (10M)