



INSTITUTE OF AERONAUTICAL ENGINEERING (Autonomous)

B.Tech VI Semester End Examinations (Regular), November– 2020

Regulation: IARE–R16

INTRODUCTION TO AUTOMOBILE ENGINEERING

Time: 2 Hours

(AE)

Max Marks: 70

Answer any Four Questions from Part A

Answer any Five Questions from Part B

PART – A

1. Give the classification of automobiles. [5M]
2. What are the effects of improper cooling? [5M]
3. Explain in detail about planetary gear system. [5M]
4. Write about steering geometry in detail. [5M]
5. Explain the formation of NO_x and discuss EGR to control it. [5M]
6. Discuss briefly about engine servicing [5M]
7. Explain radiator cooling system with a neat sketch. [5M]
8. What is the function of a clutch? Explain centrifugal clutch with a neat sketch. [5M]

PART – B

9. Explain electronic fuel injectin with a posible sketch. [10M]
10. What are the functions of lubricant. Explain centrifugal type oil filter. [10M]
11. Mention the types of ignition systems in an automobile and explain in detail any one with suitable sketch. [10M]
12. Describe the working of automatic high beam and low beam control with suitable sketch. [10M]
13. List the functions of differential in an automobile and explain its working principle with suitable sketch. [10M]
14. Describe the working of epicyclic gear box with a sketch and identify its applications in automobiles. [10M]
15. Sketch the arrangement of pneumatic braking system used in automobiles and explain its properties. [10M]
16. Describe the working of ABS in an automobile with the help of a sketch. [10M]
17. Explain the driving cycle for which the vehicles are tested in mass emission test during the certification / new launch of the vehicle. [10M]
18. How does the fuel-air ratio affect the exhaust emission idle? [10M]