

Code No: **R1642033**

R16

Set No. 1

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

AUTOMOBILE ENGINEERING

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any FOUR questions from Part-B

PART-A (14 Marks)

1. a) Write a short note on decarbonisation. [2]
b) What is a tube less tyre? [2]
c) What is the effect of excessive toe in? [3]
d) Why do heavy vehicles prefer drum brakes? [3]
e) What is traction control? [2]
f) What is the necessity of service? [2]

PART-B (4x14 = 56 Marks)

2. a) Explain with a neat sketch the working of turbocharger. Write its advantages and limitations. How it is different from supercharge? [7]
b) What is lubrication? Explain about wet sump lubrication with a neat sketch. [7]
3. a) With a neat sketch explain the construction and working of centrifugal clutch. Write its advantages and limitations. [7]
b) What is a differential? Explain the working of differential rear axle with a neat sketch. [7]
4. a) Explain center point steering? [5]
b) What is camber? Explain the effects of positive, negative and zero camber. [6]
c) Write a short note on steering linkages. [3]
5. a) Explain the working of rigid axle suspension system. [7]
b) Enumerate the components of a pneumatic brake system and state their functions briefly. [7]
6. a) Explain the engine specifications with regard to power. [5]
b) Discuss about the following [9]
i) Central locking ii) Speed control iii) seat belts.
7. a) Explain exhaust gas treatment for pollution control. [7]
b) Discuss the service details of crank shaft and main bearing. [7]