Code No: 138AU **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, December - 2020
AUTOMOBILE ENGINEERING
(Common to ME, MSNT)

Time: 2 Hours **Max.Marks:75**

Answer any Five Questions
All Questions Carry Equal Marks
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1. Describe the importance of charging the engines and differentiate between turbo-charging and super charging. [15]

2. "Good design of combustion chamber helps in reducing exhaust emissions" - support the above statement with suitable explanation. [15]

3. Explain why it becomes essential to use antifreezes when atmospheric temperature falls below zero. What are the requirements to be taken into account while selecting suitable antifreeze? [15]

4. What are the various types of radiators? Explain the construction of fin tube type radiator with a suitable diagram. [15]

5. What are the general problems in the rear axle assembly and explain method of rectification? [15]

6. Describe the purpose of spring bump stop in spring assisted suspension system. Draw its location in the suspension system. [15]

7. Explain the terms camber, castor, king pin inclination and toe-in. What are the effects of each on the steering characteristics of a vehicle? [15]

8. What are the merits and demerits of Hydrogen as alternate fuels in automobiles? Explain the pollution levels a Hydrogen based automobiles. [15]

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