



GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

(An Autonomous Institute of Government of Maharashtra)

National Highway No.6, JALGAON – 425 002

Phone No.: 0257-2281522

Fax No.: 0257-2281319

Website : www.gcoe.ac.in

E-mail : princoe@rediffmail.com



Name of Examination : **Winter 2020** - (Preview)

Course Code & Course Name : **ME402A - Elective -I)Automobile Engineering - I**

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Maximum Marks : **60**

Duration : **3 Hrs**

[Edit](#) [Print](#) [View Answer Key](#) [Close](#) **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

- 1) a) Explain the transmission system and the basic structure in detail with a neat sketch. [10]
b) Explain the types of independent suspension axles in detail. [10]
- 2) Solve any two sub-question
a) Explain the Air and hydrolastic suspension system in short. [6]
b) Explain Single plate clutch with neat sketch. [6]
c) A sliding mesh type of gearbox with forward speeds only is to be designed. the gearbox should have the following gear ratios available approximately: 1.0, 1.5, 2.5, and 3.9. the center distance between the layshaft and the mainshaft is 78 mm and the smallest gear is to have at least 16 teeth with a diametral pitch of 3.25 mm. calculate the number of teeth of the various gears and the exact gear ratios thus available. [6]
- 3) Solve any one sub-question. [6]
a) Explain the auto or car body style. [6]
b) Explain Carcass Types in details with a sketch. [6]
- 4) a) Write a short note on Correct Steering Angle with a neat sketch. [5]
b) Explain Frame Construction with neat sketch also show the different frame section through the sketch. [5]
- 5) Solve any two sub-question
a) Write a short note on Clutch Troubleshooting. [6]
b) Write a short note on Wheel and tyre Troubleshooting (explain any 8 troubleshoot points). [6]
c) Write short notes on Steering Linkages. [6]

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