



GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

(An Autonomous Institute of Government of Maharashtra)

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Name of Examination : **Summer 2021** - (Preview)

Course Code & Course Name : **IN454C - Elective-III-Automotive Instrumentation**

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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) | What is the open loop and closed loop system configuration in automobile sector? Also explain limit cycle control. | [4] |
| b) | Explain the concept of electronic engine control system | [4] |
| c) | How electronic instrumentation system works for different physical quantities in automobile ? | [4] |
| 2) a) | How does Ignition system works ? explain its types with their principle of operation . | [6] |
| b) | Write short notes on :
1) carburetor
2) sensors
3) Electronic fuel injection system | [6] |
| 3) | Solve any two sub-questions | |
| a) | What is the function of clutch ? What are the classifications of clutches? explain any one of them. | [6] |
| b) | Explain digital cruise control system. | [6] |
| c) | Explain the principle of electronic braking system. Also explain ABS. | [6] |
| 4) | Solve any two sub-questions | |
| a) | State the classification of brakes .Explain anti brake system | [6] |
| b) | Explain the necessity of gearbox and discuss the functions served by the gearbox. | [6] |
| c) | How does the windows and doors can be controlled electronically in automobile. | [6] |
| 5) a) | Explain steering system. | [6] |
| b) | Explain the following terms
1. Luminous flux
2. Luminous intensity
3. Brightness of luminance | [6] |

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