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| **Question Paper Title: MINOR-II** | | | | | | | | |
| **Total Duration (H:M): 1:15** | | **Course :Automotive Electronics** | **Course Code: 22EECC305** | | | | | |
| **Date: 02/05/2023** | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **USN** |  |  |  |  |  |  |  |  |  |  |  |  | | **Maximum Marks: 40** | | | | | |
| **Note: Answer any two full questions.** | | | | | | | | |
| **Q.No.** | **Questions** | | | **Marks** | **CO** | **BL** | **PO** | **PI** |
| 2a | Assume that the driver has activated the cruise control switch set for the desired speed of (say, 60 mph). For the following conditions determine the action of throttle controlled by the suitable control algorithm;  i) If the car is travelling on a level road  ii) If the car is then to enter a long hill with a steady positive slope (i.e. a hill going up). | | | 08 | 3 | 3 | 2 | 2.1.2 |
| 2b | The fast moving car is turning at the corner; if the vehicle is turning less/more than the driver’s intention, suggest and explain a suitable control system along with the break circuit configuration to overcome this condition. | | | 06 | 2 | 3 | 2 | 2.1.2 |
| 2c | Explain the construction and working principle of magnetic reluctance angular position sensor. What is the drawback of this sensor and how it is overcome? Explain. | | | 06 | 2 | 3 | 1 | 1.4.1 |
| 3a | Answer the following with respect to CAN communication   1. Message prioritization in case of CAN protocol. 2. Structure of CAN node 3. Physical signal transmission 4. What is the data seen by the CAN bus for the following condition?   C:\Users\giree\Desktop\New Microsoft PowerPoint Presentation21.jpg | | | 08 | 2 | 3 | 1 | 1.4.1 |
| 3b | What is ride and handling of an automobile? Provide an electronic solution managing these conditions. | | | 06 | 3 | 3 | 1 | 2.1.2 |
| 3c | Suggest and explain the sensor used for closed loop operation of an engine control system to maintain desired air/fuel ratio. | | | 06 | 2 | 2 | 2 | 1.4.1 |