

Code No.: R22EC57103PE

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I-M.TECH-I-Semester End Examinations (Regular) - March- 2024
COMMUNICATIONS BUSES & INTERFACE (PE-I)
(VLSISD)

[Time: 3 Hours]

[Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(10 Marks)

1. a) Define RS 485 and its importance [1M]
- b) How is clock synchronization maintained in I2C communication? [1M]
- c) What is recessive bit? [1M]
- d) Mention the significance of data link layer in CAN protocol. [1M]
- e) Define PCIe bandwidth. [1M]
- f) How many types of PCIe are there? [1M]
- g) What do you mean by Descriptor ? [1M]
- h) What is Interrupt transfer in USB data types? [1M]
- i) What are the 3 modes of serial communication? [1M]
- j) What is Data streaming? [1M]

PART-B

(50 Marks)

2. Explain the functionalities of RS 232 & RS 485 standard serial interface with neat diagrams. [10M]
- OR**
3. Discuss the various steps of I2C data transmission. [10M]
4. Discuss about CAN architecture in detail. [10M]
- OR**
5. Explain about data frames used in a CAN network. [10M]
6. What is the configuration space for PCIe? [10M]
- OR**
7. Explain how PCIe error handling and recovery is carried out? [10M]
8. Explain the various types of data transfer in USB. [10M]
- OR**
9. Explain in detail about device driver. [10M]
10. Explain SFPDP and its applications. [10M]
- OR**
11. Discuss the features of fiber optic in serial communication protocol. [10M]
