Code No.: R22EC57103PE12 | R22 | H.T.No. | | | 8 | R | | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I–M.TECH–I–Semester End Examinations (Supply) - September- 2023
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)	List out any two serial communication devices.	[1M]
b)	What are the transmission lines in RS485?	[1M]
c)	What are available layers in CAN architecture?	[1M]
d)	List the hardware protocols of PCIe	[1M]
e)	Compare I2C and SPI Applications	[1M]
f)	Discuss read operation in PCI.	[1M]
g)	What are the different transfer types used in USB?	[1M]
h)	What are the types of data transfers used in USB?	[1M]
i)	List the differences between optical fiber cable and copper cable.	[1M]
j)	What are the different parallel FPDP frame structures?	[1M]

PART-B **(50 Marks)**

2.a)	What are the features of serial bus?	[5M]
b)	Explain about Physical Interface and its importance.	[5M]
	OR	
3.a)	Explain RS232 and its interfacing protocol in serial communication.	[5M]
b)	What are the various applications of RS232?	[5M]
4.a)	Explain the data transmission in CAN.	[5M]
b)	What is CAN protocol and how it is implemented?	[5M]
	OR	
5.a)	Write short notes on CAN frame formats.	[5M]
b)	Discuss various fields in standard CAN.	[5M]
6.	Discuss the features and applications of PCIe.	[10M]
	OR	
7.	What is PCIe and discuss about PCIe generations?	[10M]
8.	Explain in detail about the USB connector and list out the various USB signaling schemes.	[10M]
	OR	
9.	Explain the following USB data transfer types.	[~~10M~~]
a)	Control transfer.	[5M]
b)	Interrupt transfer.	[5M]
10.	Discuss about data streaming in serial communication protocol.	[10M]
	OR	
11.	Explain about flow control mechanism involved in SFPDP.	[10M]

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