Course Code: **23AM5D02**

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

III–B.Tech.I – Semester Regular Examinations (BR23), Nov/Dec– 2025

INTERNET OF THINGS (CSE-AI&DS)

Time: 3 hours Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-AandPart-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1. a)	Write the definition and vision of internet of things.	(2M)	CO 1	2
b)	What are the three architectural domain functionalities in M2M architecture?	(2M)	CO 1	2
c)	Draw the ITU-T reference model.	(2M)	CO 2	2
d)	Write a short note on data gathering.	(2M)	CO 2	2
e)	Explain the term CORE.	(2M)	CO 3	2
f)	List IETF recommended terms and their usages in CoAP-SMS protocol.	(2M)	CO 3	2
g)	List the different types of data which is generated at the devices.	(2M)	CO 4	2
h)	What does a process matrix mean?	(2M)	CO 4	2
i)	List five key features of cloud computing.	(2M)	CO 5	2
j)	What are the characteristic parameters which change with physical environment and therefore are used for sensing applications?	(2M)	CO 5	2

PART–B (5X10 = 50M)

2a.	Explain the suggested architectural views for IoT.	10M	CO 1	2
	(OR)			
3a.	List the features of HTTP.	10M	CO 1	2
4a.	Explain Zigbee IP communication technology.	10M	CO 2	2
	(OR)			
5a.	How does the functioning of UART, SPI and I2C differ?	10M	CO 2	2
6a.	Explain about CoAP.	10M	CO 3	2
	(OR)			
7a.	Explain how message exchanges between devices, MQTT broker and web applications.	10M	CO 3	2
8a.	List the differences between time-series database system and RDBMS in construction and usages.	10M	CO 4	2
	(OR)			
9a.	Explain Berkeley Data Analytics Stack layer software components.	10M	CO 4	2
10a.	Describe IoT Cloud-based Data Collection, Storage and Computing Services Using Nimbits.	10M	CO 5	2
	(OR)			

11å.	What are the uses of a phototransistor-LED-pair-based digital sensor in an automobile?	10 M	CO 5	2

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