



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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End - Term Examinations – May / June 2026

Date: 20- 05-2026

Time:01:00pm – 04:00pm

School: SOCSE	Program: B.Tech(CSE-Data Science)	
Course Code : CSD1709	Course Name: Edge AI and IoT Analytics	
Semester: VI	Max Marks:100	Weightage: 50%

CO - Levels	C01	C02	C03	C04	C05
Marks					

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	Name four IoT devices.	2 Marks	L1	C01
2.	Differentiate between edge computing and cloud computing.	2 Marks	L1	C01
3.	List two hardware constraints of Edge devices.	2 Marks	L1	C02
4.	Compare TinyML and traditional ML deployment.	2 Marks	L1	C02
5.	State the difference between MQTT and CoAP..	2 Marks	L1	C02
6.	What is 'decision making'? Give one example highlighting the need for it.	2 Marks	L1	C03
7.	List some 'denoising' techniques.	2 Marks	L1	C03
8.	List some characteristics of IoT sensor data.	2 Marks	L1	C03
9.	Differentiate between sensors and transducers. Give one example of each.	2 Marks	L1	C03
10.	What is the main advantage of 'quantization'? State the quantization function.	2 Marks	L1	C03

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Explain any six advantages of edge computing. Justify each point.	10 Marks	L2	C01
Or					
12.	a.	'Choosing an appropriate AI edge device depends on the practical requirements'. Justify the statement.	10 Marks	L2	C02
13.	a.	Compare Raspberry Pi, NVIDIA Jetson, Google Coral and Arduino Nano 33 BLE edge AI device considering relevant performance parameters.	10 Marks	L2	C02
Or					
14.	a.	Describe lightweight deployment process using suitable block diagram. Briefly explain each block using appropriate examples.	10 Marks	L2	C02
15.	a.	Discuss the basic process of knowledge distillation via labels. Use appropriate block diagram.	10 Marks	L2	C02
Or					
16.	a.	Explain the main approaches for obtaining a lightweight CNN network.	10 Marks	L2	C02
17.	a.	Explain network pruning and its types.	10 Marks	L2	C02
Or					
18.	a.	What is the importance of frameworks? Explain Tensor Flow Lite and Pytorch Mobile.	10 Marks	L2	C02
19.	a.	Why is performance metrics significant for Edge AI systems? Explain any five.	10 Marks	L2	C02
Or					
20.	a.	Explain the basic architecture for IoT sensor data processing, data fusion and data analysis. Use appropriate diagram.	10 Marks	L2	C03
21.	a.	Elaborate on IoT sensor data processing techniques. Give relevant examples for each.	10 Marks	L2	C03
Or					
22.	a.	Discuss the challenges in processing large-scale sensor data in real-time.	10 Marks	L2	C03

23.	a.	Write short notes on: (i) Azure IoT Hub & (ii) AWS Greengrass.	10 Marks	L2	C03
Or					
24.	a.	Write short notes on: (i) Grafana & (ii) ThingsBoard	10 Marks	L2	C03
25.	a.	Write short notes on: (i) Edge AI in Energy monitoring & (ii) Edge AI in Healthcare.	10 Marks	L2	C04
Or					
26.	a.	Write short notes on: (i) Industrial IoT & (ii) Smart Agriculture	10 Marks	L2	C04