

# GYANMANJARI INNOVATIVE UNIVERSITY

## GYANMANJARI INSTITUTE OF TECHNOLOGY

B.Tech.-Mid Semester Examination (MSE)- S2026

Enrollment No.: \_\_\_\_\_

Subject Code: BETCE16326

Subject Name: IoT and Application

Time: 2:30 PM to 4:30 PM

Date: 18-03-2026

Semester: 6

Total Marks: 60

Instructions:

1. Question No. 1 is compulsory.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	Marks
Q.1 (a) Define the Internet of Things (IoT) and explain its applications.	05
(b) Explain the challenges of IoT.	05
(c) Explain the architecture of IoT with a neat diagram.	10
Q.2 (a) Write a short note on an ultrasonic sensor	05
(b) Explain ARM and list the advantages of ARM.	05
OR	
(b) Explain the working of an LDR sensor with diagram	05
(c) Explain the architecture of the 8051 microcontroller with a neat diagram.	10
OR	
(c) Explain the working of Gyro sensor and IR sensor with diagram	10
Q.3 (a) Write a short note on XAMPP protocols.	05
(b) Define Li-Fi and explain how it works.	05
(c) Describe the MQTT protocol and its components with a diagram	10
OR	
Q.3 (a) What is BLE? Explain how it works.	05
(b) What is the difference between IPv4 and IPv6?	05
(c) Draw and explain the Arduino board architecture	10

\*\*\*\*\* All the best \*\*\*\*\*