



RAN-2611001006011001

T.Y.B.Sc. (Comp Sci.) (Sem. VI) Examination March - 2026 Major-1 - Internet of Things (IOT) (New)

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book.

Seat No.:

Student's Signature

Q. 1 Answer any seven of the following short questions (2 marks each). [13]
[5]

- A) Answer the following.
- Which of the following is a key characteristic of the Internet of Things (IoT)?
A. Manual data processing B. Centralized computing only
B. Inter connectivity of device D. Standalone operation
 - Which of the following is an example of an IoT communication protocol?
A. FTP B. SMTP
C. MQTT D. POP3
 - Which device is used to measure distance in IoT-based systems?
A. Temperature sensor B. Gas sensor
C. Ultrasonic Sensor D. Light sensor
 - Which component converts electrical signals into physical action in an IoT system?
A. Sensor B. Gateway
C. Processor D. Actuator
 - Which of the following is a commonly used single-board computer in IoT applications?
A. Arduino Mega B. NodeMCU
C. BeagleBone D. Raspberry Pi

B) Answer the following. [8]

- List any three IoT protocols and briefly describe their functions.
- Define Machine-to-Machine (M2M) communication.
- Define a digital sensor. How does it differ from an analog sensor?
- Explain the working and applications of an active IR sensor.

Q. 2 Answer any two of the following questions. [13]

- Illustrate the IoT architecture with detailed explanations of its layers. [8]

OR

- Describe the physical design aspects of IoT. [8]
- What are embedded systems? Explain their role in IoT in detail. [5]

