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RAN-2211000306026003

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B.Sc. (Computer Science) (Sem. VI) Examination September - 2025

Computer Science - VIII (Paper 603 - IOT)

Time: 2 Hours] **[Total Marks: 50**

સૂચના : / Instructions

(૧) નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of ☛ signs on your answer book

Name of the Examination:

☛ **B.Sc. (Computer Science) (Sem. VI)**

Name of the Subject :

☛ **Computer Science - VIII (Paper 603 - IOT)**

Subject Code No.: **2211000306026003**

Seat No.:

Student's Signature

Q-1. Answer the following short questions (2 marks each). [14]

1. What are the various domains where IoT can be applied?
2. What is the purpose of IoT functional blocks?
3. Explain the significance of IoT APIs.
4. What are the key differences between IoT and M2M?
5. Define a gas detector sensor and mention its applications.
6. How does an infrared (IR) sensor work?
7. What are the cloud offerings available for IoT solutions?

Q-2. Answer any two of the following questions (6 marks each). [12]

1. Explain IoT architecture with a neat diagram.
2. Discuss IoT devices and their role in IoT-based applications.
3. Explain the role of IoT protocols in communication.
4. What are the key elements of sensor technology?

Q-3. Answer any two of the following questions (6 marks each). [12]

1. How does M2M communication work, and how is it different from traditional communication methods?
2. Discuss security challenges in IoT and possible solutions.
3. Explain the working principle of an ultrasonic sensor and its applications.
4. Describe the different types of actuators and their working mechanisms.

Q-4. Answer any two of the following questions (6 marks each). [12]

1. Differentiate between sensors and actuators with examples.
2. Explain the purpose and significance of Raspberry Pi in IoT applications.
3. Discuss how Raspberry Pi can be interfaced with different Linux operating systems.
4. What are the fundamental components required to build an IoT device?

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