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Reg.No.................................
Signature.............................

# DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, NOVEMBER - 2025

## INTERNET OF THINGS

[Maximum marks: 75]                                                    [Time: 3 Hours]

## PART A

**I. Answer all the following questions in one word or one sentence.  Each question carries 1 mark.**

**(9 x 1 = 9 Marks)**

| | | Module outcome | Cognitive level |
|---|---|---|---|
| 1 | List any two IoT enabling technologies. | M1.03 | R |
| 2 | Write any two applications of IoT. | M1.01 | R |
| 3 | MQTT stands for……….. | M2.02 | R |
| 4 | List the transport protocols in IoT. | M2.04 | R |
| 5 | Define cloud computing. | M3.01 | R |
| 6 | List any two cloud service providers. | M3.01 | R |
| 7 | Define sensors. | M4.01 | R |
| 8 | List any two embedded computing boards. | M4.02 | R |
| 9 | Write the syntax of the control structure "while" in Python. | M4.04 | U |

## PART B

**II. Answer any eight questions from the following.  Each question carries 3 marks.**

**(8 x 3 = 24 Marks)**

| | | Module outcome | Cognitive level |
|---|---|---|---|
| 1 | Define any three Vs in big data analytics. | M1.03 | R |
| 2 | Write the challenges in Internet of Things. | M1.05 | U |
| 3 | Describe Level  1 in IoT application. | M1.05 | U |
| 4 | Illustrate the cloud services. | M1.03 | U |
| 5 | What is URI? | M2.04 | R |
| 6 | Write short note on the cloud services. | M3.01 | U |
| 7 | List the security issues of cloud computing. | M3.05 | U |
| 8 | Describe the role of  actuator in IoT. | M4.01 | U |
| 9 | List the features of Raspberry PI. | M4.02 | U |
| 10 | Illustrate the input and output statement in python with example. | M4.04 | U |

# PART C
## Answer all questions. Each question carries seven marks.

**(6 x 7 = 42 Marks)**

| | | Module outcome | Cognitive level |
|---|---|---|---|
| III | Explain the layers of IoT stack. | M1.02 | U |
| | **OR** | | |
| IV | Explain the features of Internet of Things. | M1.01 | U |
| V | Explain MQTT message protocol in IoT with diagram. | M2.02 | U |
| | **OR** | | |
| VI | Explain IPv4 addressing protocol. | M2.04 | U |
| VII | Explain Bluetooth Low Energy architecture. | M2.03 | U |
| | **OR** | | |
| VIII | Explain different layers of CoAP message protocol in IoT. | M2.02 | U |
| IX | Explain the challenges of cloud with IoT. | M3.02 | U |
| | **OR** | | |
| X | Illustrate the working of Fog computing. | M3.04 | U |
| XI | Explain any four sensors used in IoT. | M4.01 | U |
| | **OR** | | |
| XII | Explain the features of Arduino. | M4.02 | U |
| XIII | Explain the various control structures used in Python. | M4.04 | U |
| | **OR** | | |
| XIV | Explain the working of any two applications built with IoT. | M4.06 | U |

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