

**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**

**IV-B.TECH-I-Semester End Examinations (Supply) - December- 2025**  
**INTERNET OF THINGS**  
**(Common for CSE, CSM)**

**[Time: 3 Hours]**

**[Max. Marks: 70]**

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A**

**(20 Marks)**

1. a) Write the characteristics of IoT.	[2M]
b) List the applications of IoT.	[2M]
c) Define M2M.	[2M]
d) What are the Key elements of NFV?	[2M]
e) What are the key features of Python?	[2M]
f) Define Dictionary.	[2M]
g) Give examples for IoT devices.	[2M]
h) Define Actuation.	[2M]
i) What is Local API?	[2M]
j) What are REST based communication APIs?	[2M]

**PART-B**

**(50 Marks)**

2. Explain the most common communication protocols used in IoT.	[10M]
<b>OR</b>	
3. What are the key enabling technologies that make the Internet of Things (IoT) possible, and how do they contribute to the success of IoT applications.	[10M]
4. Illustrate the architecture of Network Function Virtualization with a neat diagram.	[10M]
<b>OR</b>	
5. Explain the steps in IoT Systems Management with NETCONF-YANG protocol.	[10M]
6. Explain python data structures with examples.	[10M]
<b>OR</b>	
7. Discuss about exception handling and python packages JSON, XML, HTTP Lib.	[10M]
8. With a neat sketch, explain the Block diagram of an IoT Device.	[10M]
<b>OR</b>	
9. How LED and switch are Interfaced with Raspberry Pi? Write the equivalent python code for interfacing.	[10M]
10. Illustrate the Django Architecture with a neat sketch.	[10M]
<b>OR</b>	
11. Explain about the communication APIs Web server for IoT.	[10M]

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