

**R19**

Code No: 5658AY

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**M. Tech II Semester Examinations, July/August – 2021**

**INTERNET OF THINGS**  
**(Computer Science and Engineering)**

**Time: 3 Hours**

**Max. Marks: 75**

**Answer any five questions**  
**All questions carry equal marks**

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- 1.a) Define Internet of Things (IoT) and explain the characteristics of IoT. [8+7]  
b) Describe about various IoT levels and Templates.
- 2.a) What are the applications of Embedded and IoT systems? Discuss.  
b) Differentiate between Software Defined Networks (SDN) and Network Function Virtualization (NFV) for IoT. [7+8]
- 3.a) How to work with functions in Python programming? Give examples.  
b) Discuss about open source hardware and its relevance to IoT. [8+7]
4. Explain the basics of IoT management with:  
a) NETCOZF  
b) YANG-NETCONF  
c) SNMP NETOPEER [5+5+5]
- 5.a) What are the protocols used in Internet of Things? Discuss.  
b) How to integrate I/O devices with Raspberry Pi 3? Explain. [8+7]
- 6.a) What are the cloud computing platforms used for IoT development? Explain.  
b) Explain IoT reference model with a neat sketch. [7+8]
- 7.a) How the exception handling is done in Python? Explain.  
b) What are the Web servers and Clouds used for IoT? Discuss. [8+7]
- 8.a) Discuss about issues in designing a RESTful web API.  
b) Write a detailed note on Python packages. [7+8]

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