

**R15**

Code No: 824AX

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA IV Semester Examinations, March/April - 2022****INTERNET OF THINGS****Time: 3 Hours****Max.Marks:75**

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

- - -

- 1.a) Define IoT and discuss its characteristics.  
b) Explain the protocol layer of IoT and explain various protocols used in each layer.[7+8]
- 2.a) Wireless communications have an effect on the development and implementation of the internet of things (IoT)? Explain.  
b) Discuss in brief about domain specific IoTs. [8+7]
- 3.a) What is network function virtualization? Explain.  
b) Explain IoT System Management with NETCONF. [7+8]
- 4.a) Explain the differences between SDN and NFV for IoT.  
b) What is NETOPEER and explain how it is used to implement IoT device management. [7+8]
- 5.a) Write a python program to describe different ways of deleting an element from the given List.  
b) Explain about Python packages – JSON and XML in detail. [8+7]
- 6.a) Explain about fruitful functions and anonymous functions with suitable examples.  
b) What type of parameter passing is used in Python? Justify your answer with sample programs. [7+8]
- 7.a) Describe the relative strength and limitation of Building IOT with RASPERRY PI.  
b) Explain in detail about the IoT physical Devices. [8+7]
- 8.a) Describe different Cloud Service Models.  
b) Explain the process of designing RESTful Web API. [7+8]

---oo0oo---