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**CSH 201**

**II Semester M.Sc. Examination, Sept./Oct. 2022**  
**COMPUTER SCIENCE**  
**Internet of Things**

Time : 3 Hours

Max. Marks : 70

**Note : Answer any five questions.**

1. a) Why do IOT systems have to be self adapting and self-configuring ? **6**  
b) What are the different communication models of IOT ? Explain them briefly. **8**
2. a) Discuss the designing of smart street lighting in smart cities. **7**  
b) Explain big data analytics and cloud computing. **7**
3. a) What is M2M ? Explain briefly about the various applications of M2M. **7**  
b) Define NFV. Briefly explain the layers of NFV. **7**
4. a) Explain the components involved in managing a network device with SNMP. **7**  
b) Discuss in detail about NETOPEER. **7**
5. a) Explain the features of python programming language. **7**  
b) Compare and contrast between python list and tuple with suitable code examples. **7**
6. a) What is the use of SPI and I2C interfaces on Raspberry Pi ? Explain. **7**  
b) Write a Python program to turn on and turn off an LED for every two seconds on Raspberry Pi board. **7**
7. a) Define WAMP. Explain the key components of WAMP. **8**  
b) Explain the procedure to use Xively. **6**
8. a) Explain in detail about Django. **8**  
b) Write a short note about following : **6**  
i) XML  
ii) JSON