

Total No. of Questions : 8]

SEAT No. :

**P472**

[Total No. of Pages : 2

**[6003]-580**

**T.E. (Computer Engineering) (Honors)**

**INTERNET OF THINGS**

**Internet of Things Architectures, Protocols and Systems Programming  
(2019 Pattern) (Semester - II) (310603)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Assume suitable data, if necessary.
- 4) Use of Non-Programmable scientific calculators is allowed.

**Q1) a)** Explain the difference between TCP and UDP Protocols? **[6]**

b) Explain HTTP and CoAP in detail. **[6]**

c) What are the responsibilities of transport layer in IoT? **[5]**

**OR**

**Q2) a)** Explain DCCP and SCTP protocol in detail. **[6]**

b) Explain MQTT protocol architecture. **[6]**

c) Explain transport layer security protocol? **[5]**

**Q3) a)** Explain IoT vulnerabilities and security challenges. **[6]**

b) What are the misuse cases in IoT security? Explain. **[6]**

c) Explain IoT Architecture with its layers? **[6]**

**OR**

**Q4) a)** Describe IoT security model. **[6]**

b) Explain key elements in IoT security. **[6]**

c) Explain the attacks in different layer of IoT. **[6]**

**P.T.O.**

- Q5)** a) Describe the components of Arduino. [6]  
b) Describe the role of Web/Cloud Services for IoT development. [6]  
c) Explain the use of APIs. [5]

OR

- Q6)** a) Describe the components of Raspberry Pi. [6]  
b) Explain essential features of web APIs. [6]  
c) Describe the components of Intel Galileo. [5]

- Q7)** a) Describe the role of IoT for Home Automation. [6]  
b) Describe the role of IoT for Agriculture applications. [6]  
c) Describe the role of IoT for Health and Lifestyle. [6]

OR

- Q8)** a) Describe role of IoT for Smart Cities development. [6]  
b) Describe the role of IoT for Industry. [6]  
c) Describe the role of IoT for Telecom/5G. [6]

