

Total No. of Questions : 8]

SEAT No. :

P-6482

[Total No. of Pages : 2

[6181]-16

B.E. (Mechanical/Automobile Engineering)

INTERNET OF THINGS

(2019 Pattern) (Semester - VII) (402044E) (Elective - III)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) *Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.*
- 2) *Neat diagram must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Use of electronic pocket calculator is allowed.*
- 5) *Assume suitable data, if necessary.*

- Q1)** a) Describe Arduino Software with respect to Source Code, Compile Code and Upload Machine Code. [9]
b) Explain the Temperature & Humidity Sensor interfacing with any board. [9]

OR

- Q2)** a) What are the types of Actuators & explain any two types in detail?[10]
b) Explain any four Arduino's built-in functions. [8]

- Q3)** a) Explain in detail IoT Communication APIs and their types. [8]
b) What are the advantages and disadvantages of Cloud Computing? [9]

OR

- Q4)** a) What are the popular communication technologies? Explain any four.[9]
b) Explain Radio-Frequency identification (RFID) communication. [8]

- Q5)** a) Explain the three components of HTTP Response made by a server to a client. [9]
b) Describe three parts of Message Queueing Telemetry (MQTT) protocol. [9]

OR

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- Q6)** a) What are the Security issues to be addressed during development of IoT? [9]
b) Describe and illustrate the structure of Representational State Transfer (REST) protocol. [9]

- Q7)** a) What are the legal challenges in implementing IoT applications? [8]
b) Describe the security, privacy and trust issues in IoT-Data-Platforms when used for Smart Cities. [9]

OR

- Q8)** a) Explain Brownfield IoT. [8]
b) Explain use of IoT in Healthcare applications. [9]

