

# C.U.SHAH UNIVERSITY

## Summer Examination-2018

**Subject Name: Internet of Things and Embedded System**

**Subject Code: 4TE08ITE1**

**Branch: B.Tech (CE,IT)**

**Semester: 8**

**Date: 26/04/2018**

**Time: 02:30 To 05:30**

**Marks: 70**

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
- 

**Q-1 Attempt the following questions:**

**(14)**

- a) What do you mean by Open-source Hardware?
- b) Which function is used to convert a JSON text into an object?
- c) What is XML?
- d) A program written with the IDE for Arduino is called \_\_\_\_\_
- e) What is DTD?
- f) What are the benefits of JSON over XML?
- g) Define Augmented Intelligence.
- h) Write difference between HTML and XML.
- i) Which is not a correct name for an XML element?  
a) <xmldocument>    b) <7eleven>    c) <phone\_number>    d) <root>
- j) Which one is not a part of 4Ps in Project Management?  
a) People    b) Product    c) Project    d) Pinnacle
- k) What function will convert a JavaScript object to a JSON string?  
a) JSON.Serialise()    b) JSON.text()    c) JSON.toString()    d) JSON.stringify()
- l) Which of the following is not a JSON type?  
a) Object    b) date    c) Array    d) string
- m) How many digital pins are there in the UNO board?  
a) 14    b) 12    c) 16    d) 20
- n) XML document is like a  
a) tree structure    b) inverted tree    c) flat structure    d) none



**Attempt any four questions from Q-2 to Q-8**

**Q-2 Attempt all questions**

- (a) Define IoT. Discuss various application areas of IoT. Describe. **07**
- (b) What is prototyping? Explain different types of prototyping? **07**

**Q-3 Attempt all questions**

- (a) What are the main Challenges of Internet of Things (IoT)? **07**
- (b) What are the three levels of user design? Explain in detail. **07**

**Q-4 Attempt all questions**

- (a) Explain in detail IoT architecture with neat diagram. **07**
- (b) Explain 4 P's of Management. **07**

**Q-5 Attempt all questions**

- (a) Explain the difference between a well-formed and a valid XML documents. **07**
- (b) Why API is used? Explain different types of API? How APIs used for accessing popular Internet services (Google, Face book, Twitter, You tube etc). **07**

**Q-6 Attempt all questions**

- (a) What kinds of information do Internet of Things (IoT) objects communicate? **07**
- (b) Explain structure of arduino programming? **07**

**Q-7 Attempt all questions**

- (a) What are the major Privacy and Security Issues in case of Internet Of Things (IoT)? **07**
- (b) Why a good planning is very necessary for successful project? Explain. **07**

**Q-8 Attempt all questions**

- (a) Explain the structure of XML document. **07**
- (b) What are the important components that exist in the Internet of Things? Discuss. **07**

