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**