

Total No. of printed pages = 2

CSE 1818 OE 51

1516123

5

Roll No. of candidate

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

BINA CHOWDHURY CENTRAL LIBRARY
(GIMT & GIPS)
Azara, Halkhowapara
Guwahati - 781017

2023

B.Tech. 8th Semester (Regular) End-Term Examination

INTERNET OF THINGS

New Regulation (w.e.f. 2017-18) & New Syllabus (w.e.f. 2018-19)

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No. 1 and any *Four* from the rest.

1. Answer the following : (10 × 1 = 10)
- (a) All the interfaces for connection to other devices in IoT must be wireless in nature (True/False)
 - (b) The Request-Response communication model involves broker (True/False)
 - (c) The IoT level, in which the sensing, data analysis, and data storage is done on the node itself is
 - (d) In case of IoT, the cloud may be used for storing data, analysis the data , as well as hosting the application (True/False)
 - (e) One of the communication protocol which can be used for M2M local area network is
 - (f) Open Flow is a standard SDN protocol for the southbound interface (True/False)
 - (g) NFV can provide the infrastructure on which SDN can run (True/False)
 - (h) The communication model that is used by MQTT is
 - (i) The number of digital pins available in the Arduino Uno is
 - (j) The Arduino Uno provides a bit ADC.

[Turn over

2. (a) List any three IoT protocols that are present in the application layer.
(b) Briefly explain any three communication model used in IoT, with suitable diagrams. (3 + 12 = 15)
3. (a) List the names of any three I/O interface, used for sensors and actuators in IoT. (3 + 12 = 15)
(b) Briefly describe the various levels of IoT.
4. (a) What is M2M? Briefly explain M2M area network. Why do we need a M2M gateway? (8 + 7 = 15)
(b) Differentiate between IoT and M2M.
5. (a) What is SDN? Mention the difference between a traditional network and SDN. (5 + 10 = 15)
(b) Briefly explain the key elements of SDN.
6. (a) Write a program in Python to generate the first 20 terms of the Fibonacci series. (5 + 10 = 15)
(b) Using either Arduino Uno or Raspbery Pi, show how can we interface a LED with a switch. Draw the necessary circuit diagram, and write the necessary code.
7. Write short notes (any three) (3 × 5 = 15)
- (a) Sensors and Actuators
 - (b) Wireless Sensor Network
 - (c) Open Flow
 - (d) Sensor Cloud
 - (e) Fog Computing

BINA CHOWDHURY CENTRAL LIBRARY
(GIMT & GIPS)
Azara, Halkhowapara
Guwahati - 781017