Reg. No. : ....

Code No. : 30612 E   Sub. Code : SECS 6 A

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2020.

Sixth Semester

Computer Science

Major Elective – INTERNET OF THINGS

(For those who joined in July 2017 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. ———— allows us to control electronic components.

   (a) RETfulAPI (b) RESTfulAPI

   (c) HTTP (d) MQTT

2. MQTT stands for ————.

   (a) MQ telemetry things

   (b) MQ transport telemetry

   (c) MQ transport things

   (d) MQ telemetry transport

3. MQTT is ———— protocol.

   (a) Machine to Machine

   (b) Internet of Things

   (c) M2M and IOT

   (d) Machine things

4. The message channel declares the ———— class attributes that defines the key string.

   (a) Command_key   (b) Command-key

   (c) Command key   (d) Key command

5. ———— specifies the function that will be called when there is a new message received from the channel.

   (a) Reconnect   (b) Error

   (c) Connect   (d) Call back

6. ———— specifies the function that will be called on an error event.

   (a) Call back   (b) Error

   (c) Connect   (d) Reconnect

7. Machine-to-Machine communication towards an emerging known as the ————.

   (a) IOT   (b) M2M

   (c) M2M and IOT   (d) MBM

8. Internet of Things needs a lot of network connection. What is the proposed "white Space" radio standard called?

(a) Bluetooth   (b) Wi Max

(c) Weightless   (d) Zig bee

9. The number of elements in the Open IoT Architecture?

(a) 6 elements   (b) 8 elements

(c) 7 elements   (d) 3 elements

10. The huge number of devices connected to the Internet of Things has to communicate automatically, not via humans. What is this called?

(a) Skynet

(b) Bot 2 Bot

(c) Machine 2 Machine

(d) Inter cloud

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Give brief background of M2M.

Or

(b) Comparison between the main characteristics of M2M and IOT.

12. (a) Define introduction about a market perspectives of IOT.

   Or

   (b) Describe Standard considerations.

13. (a) Give outline about device characteristics and Device types.

   Or

   (b) Explain CRISP-DM Process Diagram M2M and IOT analysis.

14. (a) Give details about ETSI M2M resource management.

   Or

   (b) Draw OGC functional architecture and interactions.

15. (a) Give notes on Device and application functional group.

   Or

   (b) Describe Sensing and communications field.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain Details about Megatrends, Capabilities, Implications of IOT.

Or

(b) Briefly explain about Stress measurement of M2M solution and analysis solution.

17. (a) Compare Basic working definitions about M2M to IOT.

Or

(b) Describe briefly Main design principles and needed capabilities of M2M to IOT.

18. (a) Design the Structure of ETIS M2M functional architecture with explanation.

Or

(b) Draw and Explain Analytics Architectural Overview of M2M AND IOT analysis.

19. (a) Structuring ETSI M2M high-level architecture.

Or

(b) Briefly explained ETSI M2M service capabilities.

20. (a) Explain in detail Technical design constraints — hardware is popular again.

Or

(b) Illustrate with examples Data representation and visualization.

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