

**B.Sc.(IT) Semester - 6 (CBCS) Examination**  
**March/April -2019**  
**CS-33 INTERNET OF THINGS (IOT)(CORE)**

**Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

**Q – 1 :**

- |           |                                                               |           |
|-----------|---------------------------------------------------------------|-----------|
| <b>A)</b> | <b>Answer followings:</b>                                     | <b>04</b> |
| 1)        | Write full form of 3GPP.                                      |           |
| 2)        | What is knowledge management?                                 |           |
| 3)        | What is CoAP?                                                 |           |
| 4)        | Full form of M2M.                                             |           |
| <b>B)</b> | <b>Answer the following: (Any One)</b>                        | <b>02</b> |
| 1)        | What is gateway?                                              |           |
| 2)        | What is data Validation in context to management of M2M data? |           |
| <b>C)</b> | <b>Answer the following: (Any One)</b>                        | <b>03</b> |
| 1)        | Differentiate sensor and actuator.                            |           |
| 2)        | Differentiate M2M and IoT.                                    |           |
| <b>D)</b> | <b>Answer the following: (Any One)</b>                        | <b>05</b> |
| 1)        | Describe XaaS in detail.                                      |           |
| 2)        | Discuss in brief different applications of IoT.               |           |

**Q – 2 :**

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|-----------|--------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>A)</b> | <b>Answer followings:</b>                                                                                                            | <b>04</b> |
| 1)        | Write full form of ETSI.                                                                                                             |           |
| 2)        | What is informational view?                                                                                                          |           |
| 3)        | The _____ functional component is responsible for transmission and reception of physical and MAC layer frames to/from other devices. |           |
| 4)        | What is functional view?                                                                                                             |           |
| <b>B)</b> | <b>Answer the following: (Any One)</b>                                                                                               | <b>02</b> |
| 1)        | Define term “Safety, privacy, trust, security model”.                                                                                |           |
| 2)        | Explain M2M area network.                                                                                                            |           |
| <b>C)</b> | <b>Answer the following: (Any One)</b>                                                                                               | <b>03</b> |
| 1)        | Write note on OGC in brief.                                                                                                          |           |
| 2)        | What is IoT reference Model.                                                                                                         |           |
| <b>D)</b> | <b>Answer the following: (Any One)</b>                                                                                               | <b>05</b> |
| 1)        | Write note on ETSI high level architecture.                                                                                          |           |
| 2)        | Discuss IoT Domain Model in detail.                                                                                                  |           |

**Q – 3:**

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|-----------|---------------------------|-----------|
| <b>A)</b> | <b>Answer followings:</b> | <b>04</b> |
| 1)        | What is ICMP?             |           |
| 2)        | What is full of MAC?      |           |
| 3)        | Full form of Tisch.       |           |
| 4)        | Write full form of CARP.  |           |

- B) Answer the following: (Any One) 02**
- 1) What is DASH7?
  - 2) Differentiate RPL and CORPL.
- C) Answer the following: (Any One) 03**
- 1) What is Bluetooth Low Energy?
  - 2) When should we use Zigbee Smart Energy?
- D) Answer the following: (Any One) 05**
- 1) Write note on 6LoWPAN as Network Layer Protocol.
  - 2) Discuss WirelessHART protocol in detail.
- Q – 4 :**
- A) Answer followings: 04**
- 1) Write full form of MPTCP.
  - 2) TCP protocol is trusted in compare to UDP.
  - 3) Write full form of AMQP.
  - 4) Write any one messaging modes of CoAP.
- B) Answer the following: (Any One) 02**
- 1) Describe SCTP.
  - 2) Describe DCCP.
- C) Answer the following: (Any One) 03**
- 1) Differentiate TLS and DTLS.
  - 2) Explain XMPP.
- D) Answer the following: (Any One) 05**
- 1) Explain and differentiate TCP and UDP.
  - 2) Write a note on MQTT.
- Q – 5 :**
- A) Answer followings: 04**
- 1) Applications can provide additional level of security using \_\_\_\_\_ as a transport layer protocol.
  - 2) What is full form of SSL?
  - 3) TLS is the successor protocol to SSL.
  - 4) 6LoWPAN by itself does not offer any mechanisms for security. (True / False)
- B) Answer the following: (Any One) 02**
- 1) What is oneM2M?
  - 2) What is BBF?
- C) Answer the following: (Any One) 03**
- 1) How RPL is secure?
  - 2) What is OMA?
- D) Answer the following: (Any One) 05**
- 1) Discuss security in MAC 802.15.4 protocol.
  - 2) Discuss ETSI M2M in detail.

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