



JC-003-1046003

Seat No. _____

B. Sc. (I.T.) (Sem. VI) (CBCS) (W.E.F. 2016) Examination

August – 2019

CS - 33 : Internet of Things (IOT)

(New Course)

Faculty Code : 003

Subject Code : 1046003

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1 (A) Answer the Following : 4
- (1) Give full form of M2M.
 - (2) What is XaaS?
 - (3) What is IOT Gateway?
 - (4) List out different components of IOT.
- (B) Answer in Brief : (Any **One** Out of Two) 2
- (1) Briefly Explain Design Principles of IOT.
 - (2) Explain Local and Wide Area Networking.
- (C) Answer. in Detail : (Any **One** Out of Two) 3
- (1) Differentiate : M2M and IOT technology.
 - (2) Explain Business Process in IOT.
- (D) Write note on : (Any **One** Out of Two) 5
- (1) Write a detailed note on IOT devices.
 - (2) Explain IOT analytics.

- 2 (A) Answer the Following : 4
- (1) IOT Architecture is mainly categorized into _____ stages.
 - (2) _____ protocol is used for real time communication and streaming XML data.
 - (3) _____ layer provides facility to represent and visualize the data.
 - (4) Give definition of Remote control.
- (B) Answer in Brief : (Any **One** Out of Two) 2
- (1) Explain State of the Art.
 - (2) What are real word design and technical design constraints?
- (C) Answer in Detail : (Any **One** Out of Two) 3
- (1) Differentiate: Functional View and Information View.
 - (2) Explain Deployment and Operational View.
- (D) Write note on : (Any **One** Out of Two) 5
- (1) Explain Data representation and Visualization.
 - (2) Write a note on IOT reference Architecture.
- 3 (A) Answer the Following : 4
- (1) Zigbee specifications are based on _____ protocol.
 - (2) What is IEEE 802.15 Protocol?
 - (3) Give full form of RPL.
 - (4) Give full form of ICMP.

- (B) Answer in Brief : (Any **One** Out of Two) **2**
- (1) Explain Wireless HART.
 - (2) Briefly Explain Z-Wave.
- (C) Answer in Detail : (Any **One** Out of Two) **3**
- (1) Explain Bluetooth Low Energy and Zigbee Smart Energy.
 - (2) Write notes on IPv4 and IPv6.
- (D) Write a note on : (Any **One** Out of Two) **5**
- (1) Explain Following Terms (Any Four) :
CORPL
CARP
3GPP MTC
6TiSCH
 - (2) Write a note on PHY/MAC Layer in detail.
- 4 (A) Answer the Following : **4**
- (1) Transport Layer indicates _____.
 - (2) What is CoAP?
 - (3) Give full form of MQTT.
 - (4) What is the main work of Session Layer?
- (B) Answer in Brief : (Any **One** Out of Two) **2**
- (1) Explain HTTP in brief.
 - (2) Shortly Explain UDP.

- (C) Answer in Detail : (Any **One** Out of Two) **3**
- (1) Explain TCP and MPTCP.
 - (2) Explain DCCP and SCTP.
- (D) Write a note on : (Any **One** Out of Two) **5**
- (1) Write note on TLS and DTLS.
 - (2) Explain AMQP and XMPP
- 5** (A) Answer the Following : **4**
- (1) Give full form of OMA.
 - (2) What is DASH7?
 - (3) What is 6LoWPAN?
 - (4) List out any 3 services provided by Application Layer.
- (B) Answer in Brief : (Any **One** Out of Two) **2**
- (1) Briefly Explain how Service Layer works.
 - (2) Briefly Explain MAC 802.15.4.
- (C) Answer in Detail : (Any **One** Out of Two) **3**
- (1) Explain BBF in brief.
 - (2) Write a note on ETSI M2M.
- (D) Write a note on : (Any **One** Out of Two) **5**
- (1) Write note on Application Layer.
 - (2) Write note on security in IOT protocols.