

Model Question Paper-2 with effect from 2021(CBCS Scheme)

USN

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Seventh Semester B. Tech Degree Examination INTERNET OF THINGS

TIME: 03 Hours

Max.Marks:100

Note: Answer any FIVE full questions, choosing at least ONE question from each MODULE

| Module-1 | | | *Bloom's Taxonomy Level | COs | Marks |
|----------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-------|
| Q.01 | a | What is IoT? Explain genesis of IoT with a neat diagram. | L1 | 1 | 10 |
| | b | Explain IT and OT networks with different criterion. | L2 | 1 | 10 |
| OR | | | | | |
| Q.02 | a | Explain access network sub-layer with example. | L2 | 1 | 10 |
| | b | Explain various access technologies with respect to distance in core IoT functional stack. | L2 | 1 | 10 |
| Module-2 | | | | | |
| Q.03 | a | Explain key advantages of Internet Protocol for the IoT. | L2 | 2 | 10 |
| | b | Explain the need for optimization. | L2 | 2 | 10 |
| OR | | | | | |
| Q.04 | a | Explain with neat diagram Constrained Application Protocol (COAP) message format. | L2 | 2 | 10 |
| | b | Write short notes on: i) Supervisory Control and Data Acquisition (SCADA). ii) Message Queuing Telemetry Transport (MQTT) publish/ subscribe frame | L1 | 2 | 10 |
| Module-3 | | | | | |
| Q.05 | a | Explain the Logical Framework Based on the Purdue Model for Control Hierarchy. | L2 | 3 | 10 |
| | b | What is OCTAVE? With an illustration explain OCTAVE Allegro Steps and Phases | L2 | 3 | 10 |
| OR | | | | | |
| Q.06 | a | Explain Security Between Levels and Zones in the Process Control Hierarchy Model with a neat diagram. | L2 | 3 | 10 |
| | b | Explain any three Big data tools and technologies | L2 | 3 | 10 |
| Module-4 | | | | | |
| Q.07 | a | List and explain the difference between IoT and M2M | L2 | 4 | 10 |
| | b | What is SDN? With a neat diagram explain the SDN architecture. | L2 | 4 | 10 |

| OR | | | | | |
|-----------|---|----------------------------------------------------------------------------------|----|---|----|
| Q.08 | a | With a neat diagram explain the architecture for the connected factory. | L2 | 4 | 10 |
| | b | Explain the differences between SDN and Conventional network with neat diagrams. | L2 | 4 | 10 |
| Module -5 | | | | | |
| Q9 | a | Explain the importance of IoT in Cities. | L2 | 5 | 10 |
| | b | Explain the importance of IoT for Environment. | L2 | 5 | 10 |
| OR | | | | | |
| Q10 | a | Explain the role of IoT in Agriculture. | L2 | 5 | 10 |
| | b | Explain the role of IoT in Industry. | L2 | 5 | 10 |

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the Cos and Pos to be attained by every bit of questions.

Model Question Paper-1 with effect from 2021(CBCS Scheme)

USN

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INTERNET OF THINGS**

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| Module-1 | | | *Bloom's Taxonomy Level | COs | Marks |
|----------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-------|
| Q.01 | a | Define IoT. Explain in detail IoT and digitization. | L1 | 1 | 10 |
| | b | Explain in detail with any two example IoT impact. | L2 | 1 | 10 |
| OR | | | | | |
| Q.02 | a | Explain different challenges of IoT. | L2 | 1 | 10 |
| | b | Explain in detail IoT World Forum (IoTWF) standard architecture | L2 | 1 | 10 |
| Module-2 | | | | | |
| Q.03 | a | Explain key advantages of Internet Protocol for the IoT. | L2 | 2 | 10 |
| | b | Explain the need for optimization. | L2 | 2 | 10 |
| OR | | | | | |
| Q.04 | a | Explain with neat diagram Constrained Application Protocol (COAP) message format. | L2 | 2 | 10 |
| | b | Write short notes on: i) Supervisory Control and Data Acquisition (SCADA). ii) Message Queuing Telemetry Transport (MQTT) publish/ subscribe frame | L1 | 2 | 10 |
| Module-3 | | | | | |
| Q.05 | a | What are the ways IoT data is categorized? Explain in detail. | L2 | 3 | 10 |
| | b | Explain in detail the core functions of edge analytics with necessary diagrams. | L2 | 3 | 10 |
| OR | | | | | |
| Q.06 | a | Explain the different steps and phases of OCTAVE Allegro methodology. | L2 | 3 | 10 |
| | b | Write short notes on: i) Lambda Architecture ii) Big data tools and technologies | L2 | 3 | 10 |
| Module-4 | | | | | |
| Q.07 | a | List and explain the difference between IoT and M2M | L2 | 4 | 10 |
| | b | What is SDN? With a neat diagram explain the SDN architecture. | L2 | 4 | 10 |

| OR | | | | | |
|-----------|---|----------------------------------------------------------------------------------|----|---|----|
| Q.08 | a | With a neat diagram explain the architecture for the connected factory. | L2 | 4 | 10 |
| | b | Explain the differences between SDN and Conventional network with neat diagrams. | L2 | 4 | 10 |
| Module -5 | | | | | |
| Q9 | a | Explain the development design of the weather monitoring system. | L2 | 5 | 10 |
| | b | Write the domain model of the home intrusion detection system. | L2 | 5 | 10 |
| OR | | | | | |
| Q10 | a | Explain the role of IoT in Retail. | L2 | 5 | 10 |
| | b | Explain the role of IoT in Logistics. | L2 | 5 | 10 |

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the Cos and Pos to be attained by every bit of questions.