

Basavarajeswari Group of Institutions
BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT
 (Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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First Semester B.E. Degree Examinations, March/April 2024

INTRODUCTION TO INTERNET OF THINGS

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO:PI)</u>
<u>MODULE – 1</u>			
1.	a. Discuss the different types of network reachabilities present in computer networks.	08	(2: 1: 1.3.1)
	b. With neat diagrams, describe each physical topology related to computer networks.	08	(2 : 1: 1.3.1)
	c. Explain point to point and point to multipoint connection types with neat diagram.	04	(2 : 1: 1.3.1)
OR			
2.	a. With neat diagram, explain each layer in the ISO OSI layered network model.	08	(2: 1: 1.3.1)
	b. Discuss various networking components present in IOT network.	08	(2 : 1: 1.3.1)
	c. Discuss digital lock and smart factories in the evolution of IOT.	04	(2 : 1: 1.3.1)
<u>MODULE – 2</u>			
3.	a. Explain the various sensing types present in an IOT sensing environment with neat diagrams.	08	(2: 2: 1.3.1)
	b. Explain the functional block of typical sensor node in IOT.	06	(2 : 2: 1.3.1)
	c. Distinguish between Sensors, Transducers and Actuators.	06	(2 : 2: 1.3.1)
OR			
4.	a. Define actuator and classify different types of actuators used in IOT applications.	10	(2: 2: 1.3.1)
	b. Classify various sensors based on power requirements, sensor output and property to be measured.	06	(2 : 2: 1.3.1)
	c. Discuss in brief about resistive transducer with neat diagram.	04	(2 : 2: 1.3.1)
<u>MODULE – 3</u>			
5.	a. Define data format. What are the different types of data format found in IOT network?	08	(2: 3: 1.3.1)
	b. Explain onsite and offsite processing in processing topologies.	06	(2 : 3: 1.3.1)
	c. Explain about the importance of processing in IOT.	06	(2 : 3: 1.3.1)
OR			
6.	a. Discuss in detail about IOT device design and selection considerations.	10	(2: 3: 1.3.1)
	b. Explain processing offloading and offload Considerations.	10	(2: 3: 1.3.1)

MODULE – 4

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| 7. | a. | Explain in detail the architecture of smart irrigation management system with a neat diagram. | 10 | (2: 4: 5.1.1) |
| | b. | Explain in detail about architecture of a sensor cloud platform. | 10 | (2: 4: 5.1.1) |

OR

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| 8. | a. | Discuss in detail about the service and deployment models in cloud with neat diagrams. | 10 | (2: 4: 5.1.1) |
| | b. | Explain in detail about the components of agricultural IOT with a neat diagram. | 10 | (2: 4: 5.1.1) |

MODULE – 5

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| 9. | a. | Discuss briefly the advantages and risks of healthcare IOT with a diagram. | 10 | (2: 5: 5.1.1) |
| | b. | Discuss in detail about the architecture of a vehicular IOT with a neat diagram. | 10 | (2: 5: 5.1.1) |

OR

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| 10. | a. | Discuss in detail about the architecture of a healthcare IOT with a neat diagram. | 10 | (2: 5: 5.1.1) |
| | b. | Discuss briefly the AmbuSens system with neat diagram. | 06 | (2: 5: 5.1.1) |
| | c. | Explain briefly the concept of machine learning. | 04 | (2: 5: 5.1.1) |

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