Basavarajeswari Group of Institutions

2022 SCHEME

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

USN | | | | | | | | | | |

Course Code | 2 | 2 | E | T | C | 15 | / | 25 | H |

First / Second Semester B.E. Degree Summer Semester Examinations, September/October 2025

INTRODUCTION TO INTERNET OF THINGS(IoT)

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

Q. No		*Question*	*Marks*	*(RBTL:CO:PI)*
		Module-1		
1.	**a.**	Explain star, mesh, bus and ring topologies along with neat diagrams.	**08**	**(2 :1 : 1.3.1)**
	b.	Discuss the functionality of each layer present in ISO-OSI model with neat diagram.	**08**	**(2 :1 : 1.3.1)**
	c.	Discuss in brief about LAN, PAN, MAN and WAN.	**04**	**(2 :1 : 1.3.1)**
		(OR)		
2.	**a.**	Explain about enabling IOT & the complex interdependence of technologies.	**08**	**(2 :1 : 1.3.1)**
	b.	Discuss each component present in IOT networking components along with diagram.	**08**	**(2 :1 : 1.3.1)**
	c.	Discuss in brief about point to point & point to multi point connections.	**04**	**(2 :1 : 1.3.1)**
		Module-2		
3.	**a.**	Explain scalar, multimedia, hybrid and virtual sensing types along with diagram.	**10**	**(2 :2 : 1.3.1)**
	b.	Define sensor resolution, accuracy and precision.	**06**	**(1 :2 : 1.3.1)**
	c.	Discuss any four sensorial deviations.	**04**	**(2 :2 : 1.3.1)**
		(OR)		
4.	**a.**	Discuss the function of each block in a typical sensor node in IOT along with the diagram.	**08**	**(2 :2 : 1.3.1)**
	b.	Describe capacitive and piezoelectric transducers with neat diagrams.	**06**	**(2 :2 : 1.3.1)**
	c.	Discuss any six types of actuators.	**06**	**(2 :2 : 1.3.1)**
		Module-3		
5.	**a.**	Explain processing offloading with neat diagram along with offload locations.	**08**	**(2 :3 : 1.3.1)**
	b.	Define structured and unstructured data formats along with diagram.	**06**	**(1 :3 : 1.3.1)**
	c.	Define very time critical data, time critical data & normal data along with examples.	**06**	**(1 :3 : 1.3.1)**
		(OR)		

Note: (**RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI - Performance Indicator)**

6.	**a.**	Discuss briefly about IOT device design & selection considerations.	**10**	**(2 :3 : 1.3.1)**
	b.	Describe remote and collaborative processing topologies along with diagram.	**06**	**(2 :3 : 1.3.1)**
	c.	Discuss any four offloading considerations.	**04**	**(2 :3 : 1.3.1)**

Module-4

7.	**a.**	Describe the components of agricultural IOT along with diagram.	**10**	**(2 :4 : 5.1.1)**
	b.	Explain in detail about service & deployment models along with diagram.	**10**	**(2 :4 : 5.1.1)**

(OR)

8.	**a.**	Draw neatly the architecture of a sensor cloud platform & explain about the role of end user, sensor owner & SCSP.	**10**	**(2 :4 : 5.1.1)**
	b.	Discuss in detail about the architecture of smart Irrigation management system along with neat diagram.	**10**	**(2 :4 : 5.1.1)**

Module-5

9.	**a.**	Draw and neatly explain the architecture of vehicular IOT.	**08**	**(2 :5: 5.1.1)**
	b.	Discuss the six advantages of health care IOT.	**06**	**(2 :5: 5.1.1)**
	c.	Discuss about machine learning along with its advantages.	**06**	**(2 :5: 5.1.1)**

(OR)

10.	**a.**	Draw and neatly explain the architecture of health care IOT.	**10**	**(2 :5: 5.1.1)**
	b.	Explain the architecture of AmbuSens system along with neat diagram.	**10**	**(2 :5: 5.1.1)**

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