

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: B.TECH.
BRANCH: ECE & EEE**

**SEMESTER: VII
SESSION:MO/2022**

SUBJECT: IT423 INTERNET OF THINGS

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 25.
 2. Candidates attempt for all 25 marks.
 3. Before attempting the question paper, be sure that you have got the correct question paper.
 4. The missing data, if any, may be assumed suitably.
 5. Tables/Data handbook/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q1 (a)	Explain the term “Internet of Things” and the factors affecting its growth.	[2]	1 2
Q1 (b)	Draw a neat sketch of the layered IoT Reference Architecture Model mentioning the different functions associated with each layer.	[3]	1 3
Q2 (a)	Discuss the different types of Operating Systems that can be used for IoT Devices.	[2]	2 2
Q2 (b)	Explain some common characteristics of an IoT Device and differentiate between Basic and Advanced Devices.	[3]	2 4
Q3 (a)	Using a block diagram explain different interfaces and connectivity options of an IoT Device.	[2]	2 3
Q3 (b)	Explain some of the Data Link Layer protocols used for IoT.	[3]	3 2
Q4 (a)	Explain the different types of communication modes supported in IoT.	[2]	3 2
Q4 (b)	Differentiate between WPAN, WLAN, WWAN and WWAN. Mention some of the protocols used for each of them.	[3]	3 4
Q5 (a)	What is meant by the term “Blue Tooth” and briefly explain its working.	[2]	3 2
Q5 (b)	Briefly discuss concepts of Zig Bee protocol and explore how it can be used for building IoT based Home Automation Application.	[3]	3 4

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