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GIET UNIVERSITY, GUNUPUR - 765022

Ph.D. (First Semester) Examinations, January - 2024

23SPPEEC1013 - Internet of Things and Applications (ECE)

Time: 3 hrs

Maximum: 70 Marks

The figures in the right hand margin indicate marks.

Answer ANY FIVE Questions

(14 x 5 = 70 Marks)

	Marks
1.a. Discuss how IoT technologies can contribute to urban development and sustainability.	8
b. Explain Machine-to-Machine (M2M) communication and peer networking in IoT.	6
2.a. Discuss the advantages and challenges of adopting IPv6 for IoT applications.	8
b. What are the key drivers of transition from traditional Information Technology (IT) to the Internet of Things (IoT), and how does it impact various industries?	6
3.a. How does SDN enable dynamic network management and resource allocation in IoT scenarios?	6
b. Discuss the various protocols used to support IoT communications.	8
4.a. How can these modular design and abstraction principles enhance the scalability and flexibility of IoT solutions?	10
b. Explain the security and privacy considerations in Fog computing for IoT	4
5.a. How do WSNs enable data collection and transmission in IoT applications?	8
b. Explain the concepts of edge resource pooling and caching in IoT environments?	6
6.a. How can end-users effectively manage and configure IoT devices for personalized applications?	7
b. Discuss the role of open-source hardware and embedded systems platforms in IoT development.	7
7.a. Provide an overview of IO drivers and their role in connecting various sensors and actuators to IoT platforms.	8
b. Explain the concepts of big data in IoT applications.	6
8.a. How does IoT technology enhance vehicle safety, navigation, and user experience?	7
b. How does the Information Technology (IT) Act of 2000 address IoT-related legal issues, and what is the scope for additional IoT legislation?	7

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