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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 5006

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – MAY / JUNE 2024

Sixth Semester

Computer Science and Engineering

U19CS627 – INTERNET OF THINGS

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

| | | | |
|------------------|--------------------|----------------|-----------------|
| Knowledge Levels | K1 – Remembering | K3 – Applying | K5 - Evaluating |
| (KL) | K2 – Understanding | K4 – Analyzing | K6 - Creating |

PART – A

(10 x 2 = 20 Marks)

| Q.No. | Questions | Marks | KL | CO |
|-------|---|-------|----|-----|
| 1. | Differentiate between Logical and physical design of IoT. | 2 | K1 | CO1 |
| 2. | Why do the IoT systems have to be self-adopting and self-configuring? | 2 | K2 | CO1 |
| 3. | Examine whether M2M and IoT are the same? | 2 | K3 | CO2 |
| 4. | List out the major objectives of high level ETSI architecture. | 2 | K2 | CO2 |
| 5. | Why do we need a SCADA protocol? | 2 | K4 | CO3 |
| 6. | List the requirements of RFID protocols in IoT. | 2 | K2 | CO3 |
| 7. | Analyze on features of Raspberry PI. | 2 | K4 | CO4 |
| 8. | Illustrate the building blocks of IoT device. | 2 | K3 | CO4 |
| 9. | List out benefits of smart parking in cities. | 2 | K2 | CO5 |
| 10. | What are the Elements of a Home Automation System? | 2 | K2 | CO5 |

PART – B

| | | (5 x 13 = 65 Marks) | | |
|--------|--|---------------------|----|-----|
| Q.No., | Questions | Marks | KL | CO |
| 11. a) | i. Illustrate the generic block diagram of an IoT device and explain it briefly. | 7 | K2 | CO1 |
| | ii. Mention the applications of IoT. | 6 | K1 | |
| | (OR) | | | |
| b) | i. Explain in detail about IoT levels and deployment templates. | 6 | K1 | CO1 |
| | ii. Explain the significance of each level in detail. | 7 | | |
| 12. a) | Design a neat sketch, and discuss the M2M high-level ETSI architecture. | 13 | K5 | CO2 |
| | (OR) | | | |
| b) | Write in detail about the IoT Architecture. | 13 | K2 | CO2 |
| 13. a) | List the Protocol standardization of IoT and give the current status of standardization. | 13 | K1 | CO3 |
| | (OR) | | | |
| b) | i. Point out the importance of Zigbee. | 6 | K3 | CO3 |
| | ii. Explain in detail about the architecture of Zigbee. | 7 | | |
| 14. a) | i. Describe the procedure of Building IoT with RASPERRY PI. | 7 | K1 | CO4 |
| | ii. What are the physical devices and end points? | 6 | | |
| | (OR) | | | |
| b) | Draw and explain the building blocks of IoT device. | 13 | K3 | CO4 |
| 15. a) | Express in detail about the need of IoT management tools. | 13 | K3 | CO5 |
| | (OR) | | | |
| b) | Formulate the significant use of Raspberry Pi in Smart cities and Industrial appliances. | 13 | K4 | CO5 |

PART – C

| | | (1 x 15 = 15 Marks) | | |
|--------|---|---------------------|----|-----|
| Q.No. | Questions | Marks | KL | CO |
| 16. a) | i. Describe how Smart Irrigation IoT System with NETCONFYANG. | 10 | K3 | CO4 |
| | ii. Explain service specifications for smart Electrical Vehicle Charging. | 5 | | |
| | (OR) | | | |
| b) | List out the various Real time applications of IoT. Discuss in details about how the IoT is applied in any two of them. | 15 | K4 | CO5 |