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(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2022 ONLY)

22UBC5S2

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2024

COURSE NAME: B.C.A **MAXIMUM MARKS: 50**
SEMESTER: V **TIME : 2 HOURS**

PART - IV
INTERNET OF THINGS

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. (K1)
MULTIPLE CHOICE QUESTIONS.

1. What component of the IoT physical design refers to the hardware used in a system?
   a. Sensors and actuators b. Cloud computing
   c. Data analytics software d. Blockchain
2. What is the first step in the IoT platform design process?
   a. Process Specification **b.** Domain Model Specification
   c. Information Model Specification d. Purpose & Requirements Specification
3. Which of the protocol is commonly used for publish/subscribe messaging in IoT?
   a. HTTP b. WebSocket c. MQTT d. XMPP
4. Which programming language is commonly used to program a Raspberry Pi?
   a. Java b. Python c. C# d. Ruby
5. Which connectivity option is typically not used for home automation?
   a. Bluetooth **b.** Zigbee **c.** USB **d.** WiFi

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. (K2)

6. What is the primary role of the communication functional block in IoT?
7. What is the role of a device in the IoT domain model?
8. What is the primary function of the network layer in IoT communication?
9. Describe the need of GPIO pin in Raspberry Pi.
10. Mention any two IoT real time implementation on Smart City

SECTION – B (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Explain on various IoT Enabling Technologies. **(K4)**

(OR)

b) Analyze the various IoT levels in detail. **(K4)**

12. a) Illustrate on M2M high-level ETSI Architecture with neat diagram. **(K4)**

(OR)

b) Elaborate on IoT platform Design Methodology. **(K4)**

13. a) Analyze on various models available in IoT. **(K4)**

(OR)

b) Examine on IoT Protocols in detail. **(K4)**

14. a) Discuss about Raspberry pi Physical devices and Endpoints. **(K5)**

(OR)

b) Write a Raspberry Pi Python code for LED blinking. **(K5)**

15. a) Explain the IoT design used in Agriculture. **(K5)**

(OR)

b) Analyze the usage and implementation in IoT in Home Automation. **(K5)**

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