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21PCS311

FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2021 ONLY) **REG.NO**

NGM COLLEGE (AUTONOMOUS) POLLACHI

END-OF-SEMESTER EXAMINATIONS: DECEMBER-2022

M. Sc-Computer Science **MAXIMUM MARKS: 70**

III SEMESTER **TIME: 3 HOURS**

INTERNET OF THINGS

SECTION – A (10 X1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS
MULTIPLE CHOICE QUESTIONS (K1)

1. An IoT network is a collection of _____ devices.
   a) Signal b) Machine to Machine
   c) Interconnected d) Network to Network

2. _____ provides a common mechanism for network devices to relay management information within single and multi-vendor LAN or WAN environments.
   a) SNMP b) SMNP c) SMMP d) SNNP

3. _____is a control system architecture comprising computers, networked data communications and graphical user interfaces for high-level supervision of machines and processes.
   a) Supervisory control and data acceleration
   b) Supervisory computer and data acquisition
   c) Supervisory control and data acceleration
   d) Supervisory control and data acquisition

4. A _____ of an IoT system refers to the individual node devices and their protocols that are utilised to create a functional IoT ecosystem.
   a) logical design b) physical design
   c) both a and b d) none of the above

5. _____ layer architects design how devices interact with communications systems to connect and interconnect in a structure.
   a) physical b) device c) Transport d) Application

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

6. What is node device? .
7. Define IoT system design methodology.
8. What are M2M and WSN protocols?
9. List the various components of Raspberry PI.
10. Give of IIoT.

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SECTION – B (5 X 4 = 20 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) List the various Domain specific IoTs.

(OR)

b) Differentiate IoT and M2M.

12. a) Examine the Need for IoT system management.

(OR)

b) Assess M2M high level ETSI Architecture.

13. a) Sketch the working principle of Zigbee architecture.

(OR)

b) Discuss the advantages BACNet Protocol.

14. a) Examine the features of Raspberry Pi interfaces.

(OR)

b) Summarize the building blocks of Raspberry Pi.

15. a) Summarize amazon web services for IoT.

(OR)

b) Examine how IIoT is implemented in home automation and agriculture.

SECTION – C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS.
(16TH QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Q.NO: 17 TO 21) (K4) OR (K5)

16. Outline IoT architecture with a neat sketch.
17. Summarize physical and logical design of IOT and IoT Enabling technologies
18. Illustrate IoT Platforms Design methodology.
19. Discuss IOT reference model.
20. Analyze various IoT platforms.
21. Discuss IIoT architecture, challenges and opportunities.