(FOR THE CANDIDATES ADMITTED

 DURING THE ACADEMIC YEAR 2022 ONLY)

22UBC6E5

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY-2025

B.C.A	**MAXIMUM MARKS: 50**
SEMESTER VI	**TIME : 3 HOURS**

PART - III
CURRENT TRENDS AND TECHNOLOGY

SECTION - A **(10 X 1 = 10 MARKS)**

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

1. In IoT systems, "_____" refers to the ability to interact and exchange information effectively between different devices.

   a) scalability   b) connectivity   c) automation   d) durability

2. In SAP, the architecture of a multi-tier computing system typically includes _____

   a) two   b) four   c) three   d) five

3. Which of the following is an example of structured data in the context of Big Data?

   a) Emails   b) Social media posts   c) Video files   d) Relational database tables

4. The "Perceptron" algorithm is used in _____ learning for binary classification tasks.

   a) supervised b) semi-supervised   c) unsupervised   d) reinforcement

5. In the context of Bitcoin, each block in the blockchain contains a list of _____ that have been verified and added to the ledger.

   a) user requests   b) transaction records   c) mining rewards   d) encrypted passwords

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

6. What is Internet of Things (IoT)?

7. Explain the main objective of SAP SCM (Supply Chain Management).

8. How does big data differ from traditional data management systems?

9. List the steps involved in designing a machine learning system.

10. Why is asymmetric key encryption important in blockchain technology?

SECTION – B **(5 X 3 = 15 MARKS)**
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. **(K3)**

11. a)   Explain the role of IoT Strategic Research and Innovation Directions
(OR)
   b)   Compare IoT applications in Smart Homes and Smart Manufacturing

12. a) Name key components of SAP SCM applications
(OR)
   b) Differentiate between SAP kernel architecture and multi-tier computing architecture

13. a) Describe the evolution of data management.
(OR)
   b) How does Big Data integrate multiple data types together?

14.a) Define Supervised Learning
(OR)
   b) Why is finding a maximally specific hypothesis important in machine learning?

15. a) Explain the structure and operational aspects of Bitcoin blockchain
(OR)
   b) Compare Bitcoin and Ethereum blockchains

SECTION - C   (5X 5 = 25 MARKS)
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4&K5)

16.a) Classify the strategic directions of the Internet of Things as mentioned in the IoT Strategic Research and Innovation Agenda.
(OR)
   b) Illustrate the potential impact of the Internet of Things on healthcare applications.

17. a) Compare and contrast SAP SCM and SAP APO in terms of their functionalities.
(OR)
   b) Discuss the SAP kernel architecture and its significance in the system.

18. a) Describe the evolution of data management and how it leads to the rise of Big Data.
(OR)
   b) Examine the history of distributed computing and its significance in Big Data.

19. a) Discuss the different types of machine learning and explain their applications.
(OR)
   b) Categorize and classify the different algorithms used in concept learning.

20. a) Explain the techniques used to manage the integrity of transactions and blocks in blockchain.
(OR)
   b) Categorize the different types of blockchain mechanisms and explain their functions.

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ETHICAL PAPER