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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA

SEM: I - THEORY EXAMINATION (2024-2025)

SubjectCOMPUTER CONCEPTS AND EMERGING TECHNOLOGIES...

Time: 2 Hours

Max. Marks:50

General Instructions:**IMP:** Verify that you have received question paper with correct course, code, branch etc.

1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION – A

15

1. Attempt all parts:-

- 1-a. What does the acronym HTML stand for? (CO1) (K1) 1
- A. Hyper Transfer Markup Language
B. HighText Machine Language
C. HyperText Markup Language
D. HyperTool Markup Language
- 1-b. Which of the following is NOT a programming language? (CO1) (K1) 1
- A. Python
B. Java
C. HTML
D. Microsoft Excel
- 1-c. A group of 8 bits is known as a: (CO2) (K2) 1
- A. Byte
B. Nibble
C. Word
D. Packet

- 1-d. Which one is an example of a real-time operating system? (CO3) 1
(K2)
A. Linux
B. Windows
C. RTOS
D. Android
- 1-e. Which of these is not a web browser? (CO5) (K3) 1
A. Chrome
B. Safari
C. Bing
D. Firefox

2. Attempt all parts:-

- 2.a. Differentiate between primary and secondary storage (CO1) (K1) 2
2.b. Define phishing in terms of cybersecurity. (CO2) (K1) 2
2.c. What is a URL? Why is it important? (CO3) (K2) 2
2.d. List two differences between SSD and HDD (CO4 (K3)) 2
2.e. Define machine learning in one sentence and give an example. (CO5) 2
(K4)

SECTION – B

15

3. Answer any three of the following-

- 3-a. What is the Internet of Things (IoT)? Discuss its impact on daily life 5
and its applications in various industries. (CO1) (K2)
- 3-b. Explain the role of an operating system in a computer. Discuss its 5
types and functions with examples. (CO2) (K2)
- 3-c. Explain the steps in the software development life cycle (SDLC). 5
Why is SDLC important for successful software development?
(CO3) (K3)
- 3-d. Explain the working principle of the CPU (Central Processing Unit). 5
Discuss the roles of ALU, Control Unit, and Registers. (CO4) (K3)
- 3-e. Describe the concept of Big Data. Discuss its applications in various 5
industries and its importance in decision-making. (CO5) (K2)

SECTION – C

20

4. Answer any one of the following-

- 4-a. What are the advantages of using cloud storage over traditional 4
physical storage devices? (CO1) (K2)

- 4-b. What are cookies in web browsers? How do they help in user experience and what are the privacy concerns? (CO2) (K2) 4
5. Answer any one of the following-
- 5-a. What is Networking. Define Topologies with Examples. (CO2) (K1) 4
- 5-b. What is an IP address? Explain the difference between IPv4 and IPv6 addresses. (CO2) (K1) 4
6. Answer any one of the following-
- 6-a. What is a MAC address? Discuss its role in a network and how it is different from an IP address. (CO3) (K3) 4
- 6-b. Explain the concept of virtualization in cloud computing. How does it contribute to the flexibility and scalability of cloud services? (CO3) (K3) 4
7. Answer any one of the following-
- 7-a. What is multi-cloud computing? Discuss the advantages and challenges of using multiple cloud providers. (CO4) (K4) 4
- 7-b. Explain the concept of memory in a computer. What is the difference between RAM and ROM? (CO4) (K4) 4
8. Answer any one of the following-
- 8-a. What are the different types of programming languages? Explain the differences between procedural and object-oriented programming languages. (CO5) (K4) 4
- 8-b. What are databases? Explain their purpose and give an example of a relational database management system (RDBMS). (CO5) (K4) 4