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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA (Integrated)

SEM: III - THEORY EXAMINATION (2024 - 2025)

Subject: Emerging Trends and Technology

Time: 3 Hours

Max. Marks: 100

General Instructions:*IMP: Verify that you have received the question paper with the 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**

20

1. Attempt all parts:-

1-a. Which of the following is not a characteristic of a computer? (CO1, K2)

1

- (a) Versatility
- (b) Accuracy
- (c) Diligence
- (d) I.Q.

1-b. _____ is a computer that has been designed so that it is as compact as possible. (CO1, K2)

1

- (a) Supercomputer
- (b) Mini
- (c) Mainframe
- (d) Microcomputer

1-c. Which of the following is the feature of the operating system (CO2, K3)

1

- (a) Error detection aids
- (b) Control over system performance
- (c) All of these
- (d) Job Accounting

1-d. Data communication system spanning states, countries, or the whole world

1

is (CO2, K1)

- (a) LAN
- (b) WAN
- (c) MAN
- (d) PAN

1-e. Speed of Internet is measured in (CO3, K1) 1

- (a) GHz
- (b) Gbps
- (c) GB
- (d) Dpi

1-f. The "S" in HTTPS stands for? (CO3, K2) 1

- (a) Selected
- (b) Secure
- (c) Software
- (d) System

1-g. Using Print Preview is useful when you want to (CO4, K3) 1

- (a) Colour the document
- (b) Save the document
- (c) Copy the document
- (d) View how the document will appear when printed

1-h. Data is organized in a work sheet as _____. (CO4, K1) 1

- (a) Charts and Diagrams
- (b) Rows and Columns
- (c) Tables and Boxes
- (d) Graphs

1-i. Which of the following is the correct full form of SaaS? (CO5, K2) 1

- (a) Service-as-a-Software (SaaS)
- (b) Software-and-a-Server (SaaS)
- (c) Software-as-a-Service (SaaS)
- (d) Software-as-a-Server (SaaS)

1-j. What is Artificial Intelligence? (CO5, K2) 1

- (a) Artificial Intelligence is a field that aims to make humans more intelligent
- (b) Artificial Intelligence is a field that aims to improve the security
- (c) Artificial Intelligence is a field that aims to develop intelligent machines
- (d) Artificial Intelligence is a field that aims to mine the data

2. Attempt all parts:-

2.a. Explain the characteristics and limitation of the computer system. (CO1, K2) 2

2.b.	Briefly explain network topologies. (CO2, K3)	2
2.c.	Discuss the basic functions of email. (CO3, K3)	2
2.d.	Compare different types of charts in MS Excel. (CO4, K4)	2
2.e.	What do you understand by Blockchain Technology. (CO5, K2)	2

SECTION-B

30

3. Answer any five of the following:-

3-a.	Compare between assembler, compiler and interpreter with examples. (CO1, K3)	6
3-b.	Discuss about Application software? Differentiate between Application and System software. (CO1, K4)	6
3-c.	Explain different operating system structures with neat sketch. (CO2, K4)	6
3-d.	Discuss the advantages and disadvantages of multiprogramming systems. (CO2, K3)	6
3.e.	Explain IoT and characteristics of IoT. (CO3, K2)	6
3.f.	Write and discuss some basic editing and formatting features of Microsoft word. (CO4, K3)	6
3.g.	Define Artificial Intelligence. Explain in detail.(CO5, K3)	6

SECTION-C

50

4. Answer any one of the following:-

4-a.	Illustrate the basic components of the CPU with a block diagram (CO1, K3)	10
4-b.	Define the use of computer languages? Explain its types with appropriate example. (CO1, K3)	10

5. Answer any one of the following:-

5-a.	Describe the differences between Multiprocessor System and Multiuser System (CO2, K4)	10
5-b.	Different Between half-duplex mode and full-duplex mode with diagram and example. (CO2, K4)	10

6. Answer any one of the following:-

6-a.	What do you understand by sensors? Explain the pros and cons of Sensors. (CO3, K3)	10
6-b.	Explain the different components of IoT. What are the advantage and disadvantage of Internet of Things.(CO3, K3)	10

7. Answer any one of the following:-

7-a.	Discuss about worksheet? Explain any six operations you can perform on your worksheet in detail. (CO4, K3)	10
7-b.	Write the steps involved in each of the following- (i) Mail Merge (ii) Insert an image (CO4, K3)	10

8. Answer any one of the following:-

8-a.	Discuss any five emerging technologies with their characteristics. (CO5, K4)	10
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- 8-b. Describe different types of Cloud Computing services. How public cloud is different from private cloud. (CO5, K4) 10

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