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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, &amp; C. It consists of Multiple Choice Questions (MCQ's) &amp; 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**

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1. Attempt all parts:-

- 1-a. Which of the following is the brain of the computer? (CO1, K1) 1
- (a) Central Processing Unit
  - (b) Memory
  - (c) Arithmetic and Logic unit
  - (d) Control unit
- 1-b. \_\_\_\_\_ is the computer program that would convert an assembly language in to the machine language. (CO1, K3) 1
- (a) Interpreter
  - (b) Compiler
  - (c) Comparator
  - (d) Assembler
- 1-c. Which of the following is not an operating system (CO2, K2) 1
- (a) Windows
  - (b) Linux
  - (c) Oracle
  - (d) DOS
- 1-d. BIOS is used (CO2, K2) 1
- (a) By operating system
  - (b) By compiler

- (c) By interpreter  
(d) By application software
- 1-e. Which is the communication protocol for the internet? (CO3, K2) 1  
(a) FTP  
(b) HTTP  
(c) HTML  
(d) TCP/IP
- 1-f. A program that is used to view websites is called a (CO3, K3) 1  
(a) Web viewer  
(b) Browser  
(c) Spreadsheet  
(d) Word processor
- 1-g. You can keep your personal files/folders in (CO4, K2) 1  
(a) My Folder  
(b) My Documents  
(c) My Files  
(d) My Text
- 1-h. In Excel, \_\_\_\_\_ contains one or more worksheets. (CO4, K3) 1  
(a) Template  
(b) Workbook  
(c) Active Cell  
(d) Label
- 1-i. In which of the following service models the hardware is virtualized in the cloud? (CO5, K4) 1  
(a) NaaS  
(b) PaaS  
(c) CaaS  
(d) IaaS
- 1-j. Blockchain networks are much \_\_\_\_\_ and deal with no real single point of failure. (CO5, K3) 1  
(a) Simpler  
(b) Easier to scale  
(c) Convenient  
(d) Faster

2. Attempt all parts:-

- 2.a. Draw and explain the block diagram of the computer system. (CO1, K2) 2  
2.b. Compare different classification of OS with example. (CO2, K4) 2  
2.c. Explain Smoke Sensor. (CO3, K3) 2

- 2.d. Elaborate the meaning by Autofill. (CO4, K3) 2
- 2.e. Mention the characteristics of Emerging Technologies. (CO5, K3) 2

### **SECTION-B**

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3. Answer any five of the following:-

- 3-a. Explain any four input and one output devices with their use. (CO1, K2) 6
- 3-b. Compare between assembler, compiler and interpreter with examples. (CO1, K3) 6
- 3-c. Discuss the advantages and disadvantages of multiprogramming systems. (CO2, K3) 6
- 3-d. List the various services provided by operating systems. (CO2, K3) 6
- 3.e. Compare Search Engine and Web browser. (CO3, K4) 6
- 3.f. Write and discuss some basic editing and formatting features of Microsoft word. (CO4, K3) 6
- 3.g. Give some application areas of Cloud Computing and Virtual Reality. (CO5, K3) 6

### **SECTION-C**

50

4. Answer any one of the following:-

- 4-a. Explain the difference between primary and secondary memory? Explain the role of RAM & ROM. (CO1, K4) 10
- 4-b. Define the high level and low level languages. How Assembly language different from them? Write an example of each. (CO1, K4) 10

5. Answer any one of the following:-

- 5-a. Differentiate between Batch processing system and Real Time Processing System. (CO2, K3) 10
- 5-b. Discuss various types of network topologies in computer network with its advantages and disadvantages. (CO2, K3) 10

6. Answer any one of the following:-

- 6-a. Compare between search engine and web browser with Example. (CO3, K4) 10
- 6-b. What are the main components of the IoT architecture. (CO3, K4) 10

7. Answer any one of the following:-

- 7-a. Discuss the various alignments and text formatting in MS Word. (CO4, K3) 10
- 7-b. Write short notes on following in context with MS PowerPoint a. Slide show view b. Slide master c. Slide sorter view (CO4, K3) 10

8. Answer any one of the following:-

- 8-a. List out the need and areas of Artificial Intelligence? (CO5, K4) 10
- 8-b. Explain 5 V's of Bigdata with appropriate example. (CO5, K4) 10