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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: III - THEORY EXAMINATION (2024- 2025)

Subject: Artificial Intelligence & Cyber Ethics

Time: 2 Hours

Max. Marks: 50

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

15

1. Attempt all parts:-

- 1-a. The principle of accountability in AI ensures (CO1, K2) 1
- (a) Faster algorithms
 - (b) Reduced complexity
 - (c) Data encryption
 - (d) Responsibility for actions
- 1-b. Fairness in AI (CO2, K2) 1
- (a) Ensuring all AI models perform equally well
 - (b) Avoiding bias in AI decisions to treat individuals equitably
 - (c) Maximizing accuracy in predictions
 - (d) Increasing the complexity of algorithms
- 1-c. Privacy-preserving machine learning ensures (CO3,K3) 1
- (a) Higher accuracy
 - (b) Enhanced processing speed
 - (c) Confidentiality of user data
 - (d) Reduced model size
- 1-d. UPI Stand for (CO4,K3) 1
- (a) Unified Payment Interface
 - (b) Unique Payment Interface
 - (c) Unified Payment Interaction

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| (d) | Union Payment Interface | |
| 1-e. | RPA stand for (CO5, K4) | 1 |
| (a) | Robotic Process Automation | |
| (b) | Rapid Process Automation | |
| (c) | Remote Process Automation | |
| (d) | Reliable Process Automation | |
| 2. | Attempt all parts:- | |
| 2.a. | Provide a definition of AI. (CO1,k2) | 2 |
| 2.b. | define representational bias. (CO2,K2) | 2 |
| 2.c. | Define cyber ethics. (CO3,K2) | 2 |
| 2.d. | Explain how AI can be used to infringe on copyright law, and what measures can be taken to prevent it. (CO4,K3) | 2 |
| 2.e. | Discuss the role of cybersecurity ethics in protecting sensitive information.(CO5,K4) | 2 |
| <u>SECTION-B</u> | | 15 |
| 3. | Answer any <u>three</u> of the following:- | |
| 3-a. | Explain the evolution of AI over the years. (CO1,K2) | 5 |
| 3-b. | Discuss real-world examples of fairness issues in AI. (CO2, K2) | 5 |
| 3.c. | Analyze the relationship between privacy, security, and ethical considerations in AI. (CO3, K3) | 5 |
| 3.e. | Explain the concept of regulatory impact assessment (RIA) in AI governance. (CO5,K4) | 5 |
| 3.d. | Define algorithmic bias and explain its ethical implications. (CO4,K3) | 5 |
| <u>SECTION-C</u> | | 20 |
| 4. | Answer any <u>one</u> of the following:- | |
| 4-a. | Highlight the benefits of AI in daily life. (CO1,K2) | 4 |
| 4-b. | Describe two ethical principles of AI . (CO1,K2) | 4 |
| 5. | Answer any <u>one</u> of the following:- | |
| 5-a. | Describe the relationship between bias and fairness in AI. (CO2,K2) | 4 |
| 5-b. | Differentiate between direct and indirect bias. (CO2,K2) | 4 |
| 6. | Answer any <u>one</u> of the following:- | |
| 6-a. | Compare PPML and PPDM with examples. (CO3,k3) | 4 |
| 6-b. | Explain the key steps involved in risk assessment for AI systems. (CO3,K3) | 4 |
| 7. | Answer any <u>one</u> of the following:- | |
| 7-a. | Discuss the challenges of protecting trademarks in the digital age, particularly in the context of AI-powered brand monitoring and enforcement. (CO4,K3) | 4 |
| 7-b. | can we companies protect their AI-related trade secrets in an era of rapid | 4 |

technological advancements and potential data breaches (CO4,K3)

8. Answer any one of the following:-

- 8-a. Illustrate the challenges of social media marketing and how can they be addressed (CO5,K4) 4
- 8-b. Explain the concept of social media influencers and their role in marketing campaigns. (CO5,K4) 4

REG:JULY_DEC-2024