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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

1. Attempt all parts:-

- | | | |
|------|--|----|
| 1-a. | Ethical principles in AI aim to (CO1,K2) | 15 |
| | (a) Promote fairness | |
| | (b) Maximize profits | |
| | (c) Minimize risks | |
| | (d) Eliminate errors | |
| 1-b. | Bias in AI (CO2,K2) | 1 |
| | (a) A preference or prejudice in decision-making | |
| | (b) The ability to predict outcomes accurately | |
| | (c) Lack of fairness metrics in models | |
| | (d) Transparency in AI systems | |
| 1-c. | PPDM stands for (CO3,K3) | 1 |
| | (a) Privacy-protected device management | |
| | (b) Private platform data masking | |
| | (c) Privacy-preserving data mining | |
| | (d) Private data machine learning | |
| 1-d. | unsolicited commercial email is (CO4,K3) | 1 |
| | (a) Virus | |
| | (b) Malware | |
| | (c) Spam | |

- (d) All of the above
- 1-e. One of these would refer to the exploration of the apt, ethical behaviours that are related to the digital media platform and online environment (CO5,K3) 1
- (a) Cybersecurity
- (b) Cybersafety
- (c) Cyberethics
- (d) Cyber low

2. Attempt all parts:-

- 2.a. List two examples of AI systems. (CO1,K2) 2
- 2.b. explain the bias affect in AI outcomes. (CO2,K2) 2
- 2.c. Illustrate the primary purpose of AI ethics (CO3,K2) 2
- 2.d. Discuss the role of international cooperation in addressing global challenges related to AI and intellectual property rights. (CO4,K3) 2
- 2.e. Explain the ethical considerations in collecting and using personal data? (CO5,K3) 2

SECTION-B

15

3. Answer any three of the following:-

- 3-a. Analyze the challenges in defining AI precisely. (CO1,K2) 5
- 3-b. Assess the impact of various fairness types on AI models. (CO2,K2) 5
- 3-c. Discuss the significance and limitations of PPML in modern AI systems. (CO3,K2) 5
- 3-d. Explain the concept of intellectual property rights concerning AI-generated content. (CO4,K3) 5
- 3.e. Describe how RPA can improve accuracy and compliance in healthcare. (CO5,K4) 5

SECTION-C

20

4. Answer any one of the following:-

- 4-a. Describe the significance of AI in modern technology (CO1,K2) 4
- 4-b. Analyze the role of ethics in AI implementation. (CO1,K2) 4

5. Answer any one of the following:-

- 5-a. Elaborate on outcome fairness with examples. (CO2, K2) 4
- 5-b. Explain societal implications of fairness in AI. (CO2,K2) 4

6. Answer any one of the following:-

- 6-a. Discuss the importance of privacy in AI systems. (CO3,K2) 4
- 6-b. Explain the role of security tools in AI. (CO3,K3) 4

7. Answer any one of the following:-

- 7-a. Explain the concept of fair use and how it applies to the use of copyrighted material in AI-generated content. (CO4,K3) 4

- 7-b. Discuss the legal liability of AI developers and users in cases of harm or damage caused by AI systems (CO4,K3) 4
8. Answer any one of the following:-
- 8-a. How can businesses measure the ROI of their social media marketing efforts (CO5,K4) 4
- 8-b. Discuss the emerging trends in social media marketing and advertising (CO5,K4) 4

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