

**KOTHARI INTERNATIONAL SCHOOL, NOIDA**  
**ANNUAL EXAMINATION, SESSION: 2025-26**  
**GRADE: 9 SUBJECT: ARTIFICIAL INTELLIGENCE (417)**  
**MARKING SCHEME**  
**SET B**

**DAY & DATE: WEDNESDAY- FEBRUARY 11, 2026**

**MAXIMUM MARKS: 50**

**NAME: \_\_\_\_\_**

**TIME ALLOTTED: 2 HOURS**

**ROLL NO: \_\_\_\_\_**

**GENERAL INSTRUCTIONS:**

- i). This question paper consists of 21 questions in two sections: Section A and Section B*
- ii). Section A has objective type questions, whereas Section B contains Subjective type questions.*
- iii). Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 3 hours.*
- iv). All questions of a particular section must be attempted in the correct order.*

<b><u>SECTION – A</u></b>		
<b>1. Answer any 4 out of the 6 questions.</b>		
<b>i.</b>	What is an example of non-verbal communication? (a) A written memo (b) <b>A smile</b> (c) A spoken lecture (d) A chart or graph	<b>(1)</b>
<b>ii.</b>	What are some stress management techniques? (a) <b>The ability to cope with stress and reduce its negative impact</b> (b) The ability to avoid stress entirely (c) The ability to thrive under high-stress situations (d) The ability to outperform others	<b>(1)</b>
<b>iii.</b>	Identify the input device? (a) Speaker (b) Printer	<b>(1)</b>


	(c) <b>Keyboard</b> (d) Monitor	
iv.	A person who starts an enterprise is called an a) Teacher b) <b>Entrepreneur</b> c) IT professional d) Author	(1)
v.	Which of these is not a renewable natural resource? (a) Wind (b) Water (c) Soil (d) <b>Coal</b>	(1)
vi.	What makes you complete work or studies without others cheering you? (a) Self-confidence (b) Communication (c) <b>Self-motivation</b> (d) Self-esteem	(1)
<b>2. Answer any 5 out of the 6 questions.</b>		
i.	What is a smart home? (a) A house with no windows (b) A house for robots (c) <b>A house with advanced technology</b> (d) A house made of smart phones	(1)
ii.	Which of the following is not a domain of artificial intelligence? (a) <b>Data Management System</b> (b) Computer Vision (c) Natural Language Processing (d) Data Science	(1)
iii.	Which AI domain helps computers identify and verify people based on their facial features? COMPUTER VISION	(1)
iv.	What is the role of ethics in AI? (a) Making AI robots (b) Ensuring AI behaves like humans	(1)

	(c) <b>Ensuring AI systems are developed and used responsibly</b> (d) Making AI more powerful	
v.	Which of the following is an example of a task that AI can do?  (a) Talking to birds (b) Riding a bicycle (c) <b>Translating languages</b> (d) Cooking meals	(1)
vi.	Name the virtual assistant made by IPHONE SIRI	(1)
<b>3. Answer any 5 out of the 6 questions.</b>		
i.	Which of the following stages is used by the programmers to collect the data?  (a) <b>Data Acquisition</b> (b) Problem Scoping (c) Data Exploration (d) Data Validation	(1)
ii.	State whether the given statement is True or False. Evaluation is the last stage of AI project cycle? FALSE	(1)
iii.	Which one of the following is an application of AI? (a) typing a doc (b) <b>self-driven cars</b> (c) automatic doors open and shut (d) Microwave oven functioning	(1)
iv.	Statement 1: Where block helps you to focus on the context/situation/location of the problem. Statement 2: What block helps you need to determine the nature of the problem. (a) Statement1 is correct and Statement2 is incorrect (b) Statement2 is correct and Statement1 is incorrect (c) Both Statement1 and Statement 2 are incorrect (d) <b>Both Statement1 and Statement 2 are correct</b>	(1)
v.	Mention the given application “Predicting stock market trends” belong to which domain of AI?  (a) Computer vision (b) Natural language processing (c) <b>Statistical data</b> (d) data analysis	(1)

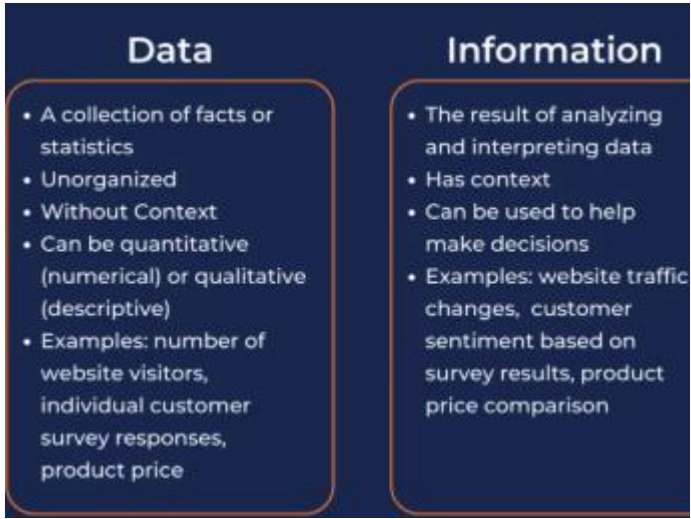
vi.	Weak AI is also called _____ (a) <b>Narrow AI</b> (b) General AI (c) Natural AI (d) Generalised AI	(1)
<b>4. Answer any 5 out of the 6 questions.</b>		
i.	Name the technology that uses electromagnetic field to automatically identify and track tags attached to objects?  (a) <b>RFID</b> (b) RDIF (c) FIDR (d) FDIR	(1)
ii.	Which of the following talks stakeholders of the problem? (a) <b>who</b> (b) where (c) what (d) why	(1)
iii.	Why is the "why" aspect of the 4Ws framework important in problem scoping? (a) To identify project stakeholders (b) To determine the project's budget (c) <b>To understand the purpose of the project</b> (d) To analyse the project's timeline	(1)
iv.	Qualitative data is numerical in nature.  a. True  b. <b>False</b>	(1)
v.	What are the basic building blocks of qualitative data?  (a) Individuals (b) Units (c) <b>Categories</b> (d) Measurements	(1)
vi.	Which term describes the visual representation of data?  (a) Data cleaning (b) Data acquisition	(1)

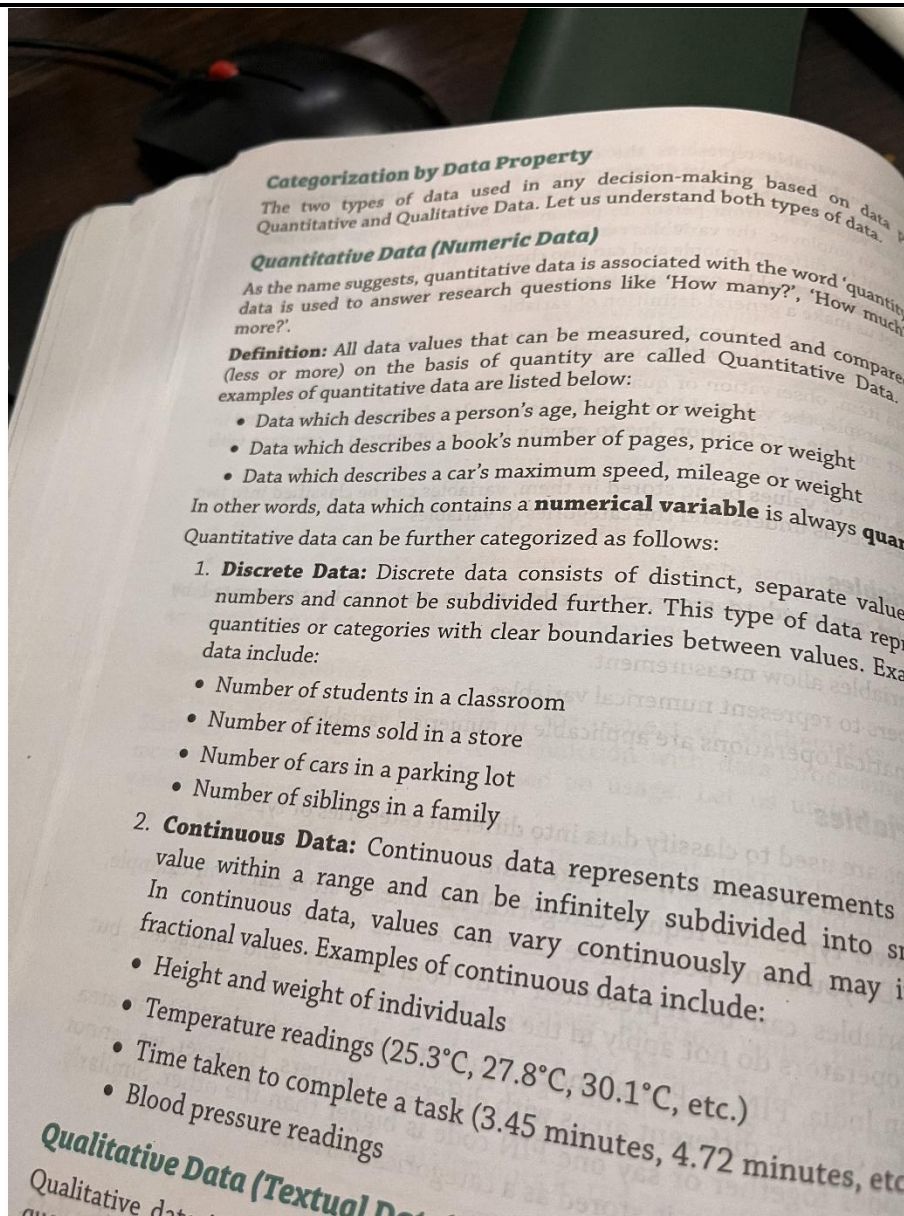
	(c) <b>Graphs and charts</b> (d) Algorithms	
<b>5. Answer any 5 out of the given 6 questions.</b>		
i.	_____ is the practice of protecting digital information from unauthorized access, corruption, or theft throughout its entire lifecycle.  (a) <b>data security</b> (b) data literacy (c) data privacy (d) data acquisition	<b>(1)</b>
ii.	_____ relates to the manipulation of data to produce meaningful insights.  (a) Data Processing (b) Data Interpretation (c) <b>Data Analysis</b> (d) Data Presentation	<b>(1)</b>
iii.	Find the missing pattern from the following 1, 4, 9, 16, ___25	<b>(1)</b>
iv.	What is the probability of getting head when you toss a coin once?  (a) 0.75 (b) 1 (c) 0 (d) <b>0.5</b>	<b>(1)</b>
v.	A die is rolled once. What is the probability of rolling a number greater than 5?  (a) <b>1/6</b> (b) 1/3 (c) 1/2 (d) 2/3	<b>(1)</b>
vi	Which of the following is NOT a strong password practice?  (a) Using a combination of uppercase, lowercase, numbers, and special characters (b) <b>Using your birthdate as your password</b> (c) Using a long password (d) Regularly changing your password	<b>(1)</b>

**Section – B**  
**Answer any 3 out of the 5 questions.**

6.	<p>Explain 7c's of communication?</p> 	(2)																																	
7.	<p>How can stress affect a student's academic performance?          Stress significantly harms academic performance by impairing cognitive functions like memory and concentration, leading to poor grades, increased absenteeism, and lower motivation</p>	(2)																																	
8.	<p>Differentiate between RAM and ROM?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e91e63; color: white;"> <th style="width: 20%;">Feature</th> <th style="width: 40%;">RAM</th> <th style="width: 40%;">ROM</th> </tr> </thead> <tbody> <tr> <td>Full Form</td> <td>Random Access Memory</td> <td>Read-Only Memory</td> </tr> <tr> <td>Type of Memory</td> <td>Volatile</td> <td>Non-Volatile</td> </tr> <tr> <td>Data Loss</td> <td>Data is lost when power is off</td> <td>Data stays safe</td> </tr> <tr> <td>Use</td> <td>Temporary storage</td> <td>Permanent instructions</td> </tr> <tr> <td>Speed</td> <td>Very fast</td> <td>Slower than RAM</td> </tr> <tr> <td>Editable</td> <td>Can be changed</td> <td>Cannot be easily changed</td> </tr> <tr> <td>Storage Capacity</td> <td>High</td> <td>Low</td> </tr> <tr> <td>Cost</td> <td>Expensive</td> <td>Cheaper</td> </tr> <tr> <td>Working Stage</td> <td>Active during processing</td> <td>Active during booting</td> </tr> <tr> <td>Example</td> <td>DDR4, DDR5</td> <td>BIOS, Firmware</td> </tr> </tbody> </table>	Feature	RAM	ROM	Full Form	Random Access Memory	Read-Only Memory	Type of Memory	Volatile	Non-Volatile	Data Loss	Data is lost when power is off	Data stays safe	Use	Temporary storage	Permanent instructions	Speed	Very fast	Slower than RAM	Editable	Can be changed	Cannot be easily changed	Storage Capacity	High	Low	Cost	Expensive	Cheaper	Working Stage	Active during processing	Active during booting	Example	DDR4, DDR5	BIOS, Firmware	(2)
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9.	<p>Explain any two characteristics of entrepreneur?  <b>Risk-Taking Ability:</b> Entrepreneurs aren't reckless; they are calculated risk-takers who assess potential uncertainties and are comfortable with potential failure, viewing it as a learning opportunity to manage and overcome challenges for business growth.  <b>Innovation &amp; Creativity:</b> This involves generating novel ideas, improving existing processes, or creating new products/services that offer better solutions for customers, driving market disruption and value creation.</p>	(2)																																	
10.	<p>What is the role of government in green economy?</p>	(2)																																	

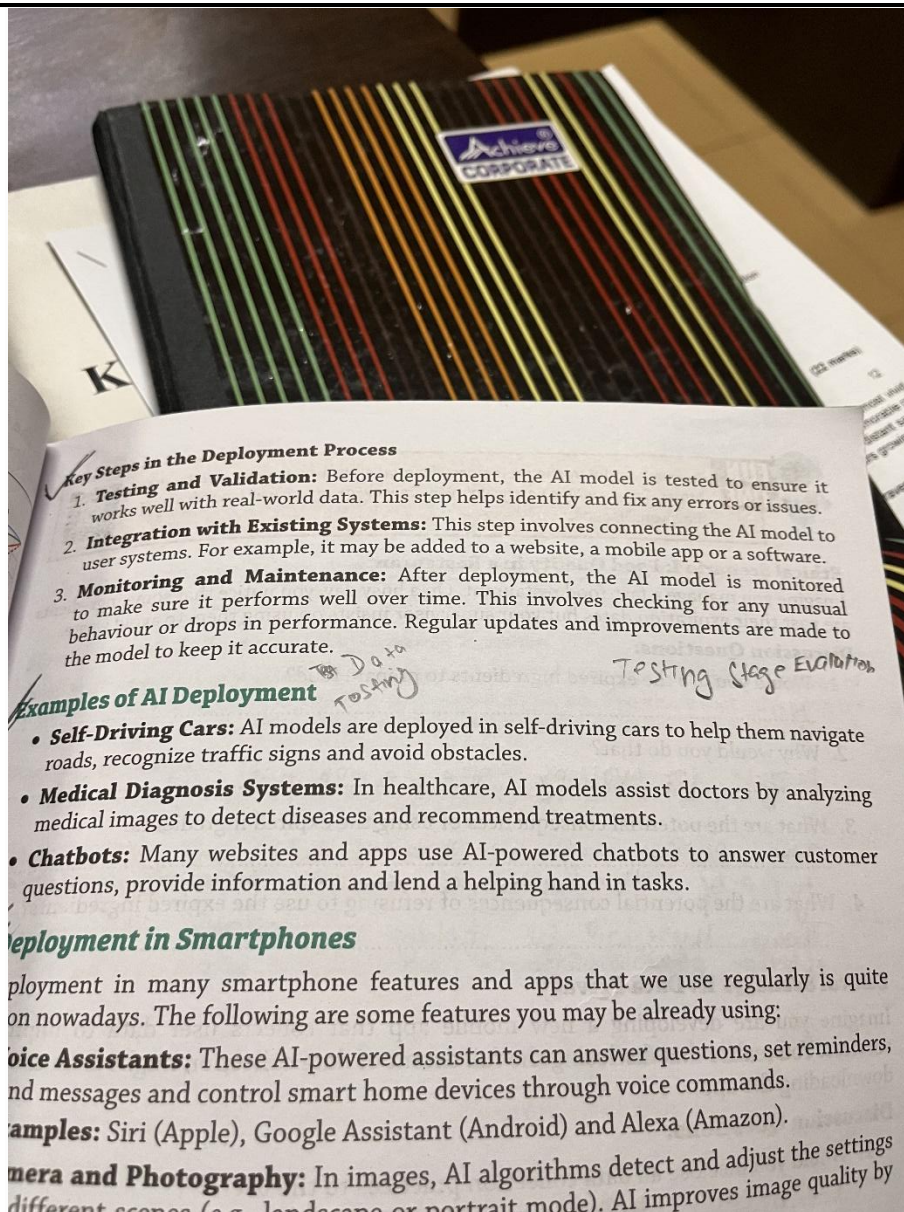
	The main role of government in a green economy is to set clear policies, regulations, and incentives (like subsidies, green taxes) to correct market failures, drive investment in sustainable technologies, and guide the transition towards low-carbon, resource-efficient, and socially inclusive growth, ensuring private sector innovation thrives within clear environmental boundaries	
<b>Answer any 4 out of the given 6 questions.</b>		
11	Explain train-test split method?	<b>(2)</b>
12	Explain about disinformation and manipulation? Disinformation and Manipulation Disinformation and manipulation are significant concerns related to the use particularly in the context of generating and spreading false or misleading informat Disinformation: Disinformation is false information that is intentionally spread or confusé people. AI can make the problem of disinformation worse in different w • Deepfakes: AI tools can make fake videos, audios or images look realistic. These deepfakes can be used to spread lies or ruin someone's reputation. Jam vadi wod ba sbou o For example, consider the given image of Elon Musk selling vegetables in an Indian market. (This is a fake AI-generated image.) • Automated Bots: AI-driven bots can be programmed to create and spread lots of fake news or confusing content on social media. This makes disinformation reach more people.	<b>(2)</b>
13	Explain two steps to become data literate? Ask the Right Questions . What kind of data is it? Numbers, text, images-data comes in many forms. Understanding the type of data helps you interpret it correctly. • Where does it come from? Be cautious of data without a credible source. Imagine a friend telling you that they saw a talking cat-would you believe them? Step 2: Learn data analysis techniques: Explore methods to analyze data such as creating charts, graphs and tables. This helps in visualizing and understanding the patterns and trends within the data. Actions: Learn Basic Statistics • Mean, Median, Mode: These are the cornerstones of basic statistics. Th help you understand the central tendency of a dataset, explaining where m partner	<b>(2)</b>
14	What is data security? Data Security refers to practices that keep information safe from unauthorized entry ,theft corruption or destruction. This ensures protection of your data. It is shield that keeps hackers, malware and other threats at bay.	<b>(2)</b>
15	Mention few examples of how generative AI is used in various fields? Kidgeni Chatgpt opensara	<b>(2)</b>

16	Differentiate between data and information? 	(2)
<b>Answer any 3 out of the 5 given questions.</b>		
17	Explain and mention any four applications of AI used in daily life?	(4)
18	What is a variable? Explain types of data by their properties and by organization? In Mathematics, a variable is used to represent unknown quantities. For in the equation given below, x and y are called variables and the equation Linear Equation in Two Variables.	(4)



19	Differentiate between Artificial Intelligence, Machine Learning and Deep Learning?	(4)
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	<b>Artificial Intelligence</b>	<b>Machine Learning</b>	<b>Deep Learning</b>	
	A broad field of study that focuses on creating intelligent machines.	A subset of AI that enables computers to learn from data and make predictions or decisions.	A subset of machine learning that employs neural networks to learn hierarchical representations of data.	
	Involves the simulation of human intelligence to solve complex problems.	Relies on statistical techniques to enable computers to learn from data.	Utilizes neural networks with multiple layers to extract features and patterns from data.	
	Relies on both structured and unstructured data to make informed decisions.	Depends on labeled and unlabeled data for training and testing.	Requires large amounts of labeled data to train complex models.	
	Can involve rule-based approaches or expert knowledge for feature extraction.	Automatically extracts features from data using algorithms.	Learns hierarchical representations of features from raw data without explicit feature	
	Can range from simple rule-based systems to complex cognitive architectures.	Can handle moderate complexity tasks, depending on the size and quality of data.	Excels in handling high-dimensional and complex data, but requires significant computational	
	Widely applicable in various domains, such as healthcare, finance, and robotics.	Used in areas like image recognition, natural language processing, and recommendation systems.	Commonly applied in computer vision, speech recognition, and natural language processing.	
20	What are the key steps in the deployment process? Mention few examples of AI deployment?			(4)



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What are the limitations of using generative AI?

(4)

Research and development	data to identify	<ul style="list-style-type: none"> <li>• Training AI models when real-world data is limited</li> <li>• Addressing data scarcity issues</li> </ul>
Data augmentation	Creates synthetic data similar to real data	Generative AI can help create suitable images, videos, audio and text rapidly, which is helpful in scaling over large projects.
Scalability	Rapid creation of content	
Accessibility	Image to audio and other examples	Generative AI can also help in increasing accessibility for differently abled people with novel and interesting applications.

### LIMITATIONS OF USING GENERATIVE AI

Generative AI has remarkable capabilities but it also has several limitations. Understanding these limitations is important for using and developing AI technologies.

- 1. Quality and Accuracy Issues:** Generative AI can sometimes generate content that is low quality or inaccurate. For example, AI-generated text may include factual errors while AI-generated images may have strange or unrealistic features.
- 2. Bias in Generated Content:** Generative AI models learn from the data that they are trained on. If the training data contains biases, the AI model can reproduce or even increase these biases. This can lead to unfair or discriminatory content.
- 3. Ethical and Legal Concerns:** Who does the ChatGPT essay you wrote belong to? Does it belong to the creator of the AI model, the user who prompts the generation, or someone else entirely?

Using Generative AI can raise ethical and legal issues related to ownership, privacy. For example, creating deepfakes (realistic fake videos) can be used maliciously to bully, spread misinformation or invade someone's privacy.

**Computational Resources:** Training and running Generative AI models require significant computational power and resources.

**Limited Understanding and Control:** Generative AI models can be like 'black boxes', meaning that even experts don't always understand how they arrive at their outputs. This lack of transparency makes it difficult to control or explain the generated content.

**Data Dependency:** Generative AI relies heavily on large amounts of high-quality data for training. If the available data is limited, biased or of low quality, the model's performance will suffer.

g Artificial Intelligence-IX