

Marking Scheme
Strictly Confidential
(For Internal and Restricted use only)
Senior Secondary School Examination, 2026 (XIIth)
SUBJECT NAME : Artificial Intelligence (Q.P. CODE 843/367)

General Instructions: -

1	The CBSE has decided to introduce On Screen Marking (OSM) for the evaluation of Class XII answer Book with the 2026 Examination.
2	You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully.
3	“Evaluation policy is a confidential policy as it is related to the confidentiality of the examinations conducted, evaluation done and several other aspects. Its leakage to public in any manner could lead to derailment of the examination system and affect the life and future of millions of candidates. Sharing this policy/document to anyone, publishing in any magazine and printing in Newspaper/Website, etc. may invite action under various rules of the Board and IPC.”
4	Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one’s own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. However, while evaluating, answers which are based on latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and due marks be awarded to them. In Class-XII, while evaluating two competency-based questions, please try to understand given answer and even if reply is not from marking scheme but correct competency is enumerated by the candidate, due marks should be awarded.
5	The Marking scheme carries only suggested value points for the answers. These are in the nature of Guidelines only and do not constitute the complete answer. The students can have their own expression and if the expression is correct, the due marks should be awarded accordingly.
6	The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. If there is any variation, the same should be zero after deliberation and discussion. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.
7	Evaluators will mark (√) wherever answer is correct. For wrong answer CROSS ‘X’ be marked. Evaluators will not put right (√) while evaluating which gives an impression that answer is correct and no marks are awarded. This is most common mistake which evaluators are committing.
8	If a question has parts, please award marks on the right-hand side for each part in the OSM Portal. Marks awarded for different parts of the question will be totaled up by the OSM System.
9	If a question does not have any parts, marks must be awarded in the left-hand margin in the OSM Portal. This may also be followed strictly.

10	No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
11	A full scale of marks _____ (example 0 to 80/70/60/50/40/30 marks as given in Question Paper) has to be used. Please do not hesitate to award full marks if the answer deserves it.
12	Every examiner has to necessarily do evaluation work for full working hours i.e., 8 hours every day and evaluate 20 answer books per day in main subjects and 25 answer books per day in other subjects (Details are given in Spot Guidelines). This is in view of the reduced syllabus and number of questions in question paper.
13	<p>Ensure that you do not make the following common types of errors committed by the Examiner in the past :-</p> <ul style="list-style-type: none"> • Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.) • Half or a part of answer marked correct and the rest as wrong, but no marks awarded.
14	While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as cross (X) and awarded zero (0) Marks.
15	The Examiners should acquaint themselves with the guidelines given in the “Guidelines for Spot Evaluation” before starting the actual evaluation.
16	The candidates are entitled to obtain photocopy of the Answer Book on request on payment of the prescribed processing fee. All Examiners/Additional Head Examiners/Head Examiners are once again reminded that they must ensure that evaluation is carried out strictly as per value points for each answer as given in the Marking Scheme.
17	If a candidate attempts both alternatives/options in a question where only one option/ alternative is required to be attempted, the Evaluator shall award marks in both the options. The system will take the higher of two scores and disregard the other response.
18	In a question having two options/alternatives, if a candidate has attempted only one, then the evaluator shall mark “NA” (Not attempted) against the option that has not been attempted by the candidate.

MARKING SCHEME
Artificial Intelligence (Subject Code - 843)
(PAPER CODE : 367) (P3670843)

	Q.No.	EXPECTED ANSWER/VALUE POINTS		Marks
		SECTION – A		
1.		Answer any 4 out of the given 6 questions on Employability Skills.		(4x1=4)
	(i)	(A) Clear	U-1 Pg 2	1
	(ii)	(C) Decreases one's chances of success	U-2 Pg 24	1
	(iii)	It occurs when people are internally motivated to do something because it brings them pleasure. OR Any other relevant answer.	U-2 Pg 24	1
	(iv)	(D) Slides	U-3 Pg 71	1
	(v)	(A) It is a non – economic activity	U-4 Pg 80	1
	(vi)	Farmer Interest Groups	U-5 Pg 114	1
2.		Answer any 5 out of the given 6 questions.		(5x1=5)
	(i)	A retail company notices a sudden decline in online sales during the last quarter. The data analytics team decides to investigate the underlying causes of this drop. They begin examining customer behaviour patterns, website traffic and product return rates to identify factors contributing to the decline. Which type of data analytics is the team primarily using? (A) Descriptive Analytics (B) Diagnostic Analytics (C) Predictive Analytics (D) Prescriptive Analytics		1
	(i)	Answer : (B) Diagnostic Analytics (1 mark for correct answer)	CHAPTER- 2 PAGE - 21	1
	(ii)	When a computer processes an image, it perceives it as a collection of tiny squares. What are these tiny squares called ? (A) Vectors (B) Pixels		1

		(C) Kernels (D) Neurons		
	(ii)	Answer : (B) Pixels (1 mark for correct answer)	CHAPTER - 3 PAGE - 45	1
	(iii)	A social media analyst is working with a large collection of audio files, images and video files to study user engagement and content trends on various platforms. Which type of Big Data is the analyst dealing with ? (A) Structured Data (B) Semi – Structured Data (C) Unstructured Data (D) Filter Data		1
	(iii)	Answer : (C) Unstructured Data (1 mark for correct answer)	CHAPTER - 5 PAGE - 88	1
	(iv)	Which component of a neural network decides whether a neuron should be activated (send a signal) or not based on the input it receives ? (A) Activation Function (B) Bias (C) Weight (D) Neuron		1
	(iv)	Answer : (A) Activation Function (1 mark for correct answer)	CHAPTER - 6 PAGE - 105	1
	(v)	What is the primary objective of Generative AI ? (A) To classify existing data into different categories. (B) To define class boundaries within existing data for classification tasks. (C) To generate new data that resembles its training samples. (D) To delete redundant data from large datasets.		1
	(v)	Answer : (C) To generate new data that resembles its training samples. (1 mark for correct answer)	CHAPTER - 7 PAGE - 124	1
	(vi)	Which ethical consideration in Data Storytelling specifically addresses the need to " Clearly cite the sources of the data, methods used for analysis, and any limitations or biases ? " (A) Accuracy (B) Transparency		1

		(C) Respect for Privacy (D) Story Relevance		
	(vi)	Answer : (B) Transparency (1 mark for correct answer)	CHAPTER - 8 PAGE - 158	1
3.		Answer any 5 out of the given 6 questions.		(5x1=5)
	(i)	The primary purpose of prescriptive Analytics is to : (A) Uncover root causes and factors contributing to specific outcomes. (B) Identify patterns, trends, and anomalies in past data. (C) Forecast future events or behaviours. (D) Recommend specific actions or interventions based on predictive insights.		1
	(i)	Answer : (D) Recommend specific actions or interventions based on predictive insights. (1 mark for correct answer)	CHAPTER - 2 PAGE - 21	1
	(ii)	A bank's fraud detection team analyses thousands of daily transactions to identify suspicious activities. During the analysis, they look for unusual spending patterns or transactions that significantly differ from a customer's normal behaviour. This process of finding such irregular or abnormal trends within a dataset is associated with : (A) Clustering (B) Recommendation (C) Regression (D) Anomaly Detection		1
	(ii)	Answer : (D) Anomaly Detection (1 mark for correct answer)	CHAPTER- 2 PAGE-20	1
	(iii)	A wildlife research organization is building a computer vision system to monitor animal movements in forests. They install motion-sensing cameras that automatically capture photos and videos of animals in their natural habitat for further analysis. The organization is currently working on which stage of the computer vision process ? (A) Image Acquisition (B) Preprocessing (C) Feature Extraction (D) Detection and Segmentation		1

	(iii)	Answer : (A) Image Acquisition (1 mark for correct answer)	CHAPTER - 3 PAGE - 48	1
	(iv)	A healthcare analytics firm gathers patient information from a large number of hospitals, laboratories, and wearable devices. Before analysing this Big Data, the company ensures the consistency, accuracy, quality, and trustworthiness of the data to produce reliable insights and reports. Which Big Data characteristic is illustrated in this scenario ? (A) Volume (B) Velocity (C) Variety (D) Veracity		1
	(iv)	Answer : (D) Veracity (1 mark for correct answer)	CHAPTER – 5 PAGE – 91	1
	(v)	In context of Neural Network the process in which input data flows through the layers, activations are computed, and the predicted output is compared to the actual target is specifically known as _____. (A) Back Propagation (B) Deep Learning (C) Forward Propagation (D) Optimization		1
	(v)	Answer : (C) Forward Propagation (1 mark for correct answer)	CHAPTER- 6 PAGE-106	1
	(vi)	Which data visualization type provides a visual representation of word data where word size indicates frequency and importance ? (A) Scatter Plot (B) Word Cloud (C) Line Graph (D) Bar Chart		1
	(vi)	Answer : (B) Word Cloud (1 mark for correct answer)	CHAPTER- 8 PAGE-155	1
4.		Answer any 5 out of the given 6 questions.		5x1=5
	(i)	What is the main purpose of evaluation in an AI project cycle ? (A) To collect data for training the model (B) To assess how well a model performs after training (C) To deploy the model into real-world systems (D) To visualize the data used for model building		1


	(i)	Answer : (B) To assess how well a model performs after training (1 mark for correct answer)	CHAPTER-2 PAGE-29	1
	(ii)	A security company is designing a computer vision system for night surveillance. The captured footage often contains random dots and blurry patches due to low lighting. To make the images clearer before object detection, the system applies a technique to remove these blurry patches and distortions. Which preprocessing technique is being used by the system ? (A) Cropping Image (B) Noise Reduction (C) Resizing Image (D) Image Normalization		
	(ii)	Answer : (B) Noise Reduction (1 mark for correct answer)	CHAPTER-3 PAGE-49	1
	(iii)	Which type of processing used in Big Data Analytics handles small batches of data at a time to minimize the delay between data collection and analysis, enabling quicker decision-making ? (A) Batch processing (B) Stream processing (C) Predictive analysis (D) Descriptive analysis		1
	(iii)	Answer : (B) Stream processing (1 mark for correct answer)	CHAPTER-5 PAGE-93	1
	(iv)	Alpha Innovations is a company specializing in artificial intelligence solutions. For a project, the development team of the company decides to use a type of neural network that extracts features from images and incorporates a three-dimensional arrangement, making it effective for processing visual data. Identify the type of neural network. (A) Recurrent Neural Network (B) Feed Forward Neural Network (C) Standard Neural Network (D) Convolutional Neural Network		1
	(iv)	Answer : (D) Convolutional Neural Network (1 mark for correct answer)	CHAPTER-6 PAGE-110	1
	(v)	What is an Artificial Neural Network (ANN) with two or more hidden layers known as ?		1

		(A) A Basic Neural Network (B) A Deep Neural Network (C) A Perceptron (D) A Connection Neural Network		
	(v)	Answer : (B) A Deep Neural Network (1 mark for correct answer)	CHAPTER-6 PAGE-105	1
	(vi)	Variational Autoencoders (VAEs) are computer programs designed to learn from data in a unique way. What are their two main parts ? (A) A generator and a discriminator. (B) An encoder and a decoder. (C) A Large Language Model and a Transformer. (D) A recurrent and a convolutional network.		1
	(vi)	Answer : (B) An encoder and a decoder. (1 mark for correct answer)	CHAPTER-7 PAGE-125	1
5.		Answer any 5 out of the given 6 questions.		5x1=5
	(i)	Assertion (A) : Social media posts and images are examples of structured data. Reason (R) : Unstructured data does not follow a predefined format. (A) Both (A) and (R) are true, and (R) is the correct explanation of (A). (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A). (C) (A) is false, but (R) is true. (D) Both (A) and (R) are false.		1
	(i)	Answer : (C) (A) is false, but (R) is true. (1 mark for correct answer)	CHAPTER-2 PAGE-23	1
	(ii)	The resolution of a digital image is determined by which factor ? (A) The numerical value assigned to each pixel (0 to 255) (B) The number of pixels it contains (C) The size of the file in bytes (D) The time taken for image acquisition		1

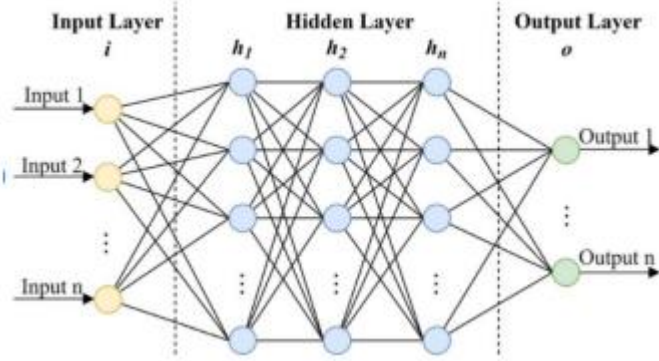
	(ii)	Answer : (B) The number of pixels it contains (1 mark for correct answer)	CHAPTER-3 PAGE 45	1
	(iii)	A company is developing a smart security camera. The camera analyses each frame to automatically identify people, vehicles, and other objects. It marks each detected object by drawing bounding boxes around them. This activity of identifying and locating multiple objects of interest within the image by drawing bounding boxes is called : (A) Semantic Segmentation (B) Instance Segmentation (C) Object Detection (D) Histogram Equalization		
	(iii)	Answer : (C) Object Detection (1 mark for correct answer)	CHAPTER-3 PAGE 52	1
	(iv)	Innovative Labs , a startup focused on developing intelligent language models, is training a neural network to improve its text prediction accuracy. During the training process, the team uses the practice of fine-tuning the weights of the neural network based on the error rate (loss) obtained in the previous iteration to minimize error. This practice is known as _____. (A) Forward Propagation (B) Activation Function (C) Back Propagation (D) Deep Learning		1
	(iv)	Answer : (C) Back Propagation (1 mark for correct answer)	CHAPTER-6 PAGE-106	1
	(v)	Why are Large Language Models (LLMs) referred to as 'large' ? (A) They use a large number of GPUs. (B) They are trained on massive datasets of text and code. (C) They can only generate long text outputs. (D) They have more layers than other models.		1
	(v)	Answer : (B) They are trained on massive datasets of text and code. (1 mark for correct answer)	CHAPTER-7 PAGE-129	1
	(vi)	The key element ' Visuals ' in data storytelling serves the purpose of : (A) Providing the basic facts or raw facts about an entity. (B) Organizing the key information in a linear and coherent fashion. (C) Representing data pictorially to convey complex information clearly and effectively. (D) Establishing the setting and main characters of the data story.		1

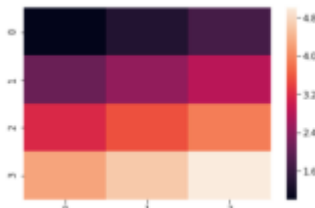

	(vi)	<p>Answer :</p> <p>(C) Representing data pictorially to convey complex information clearly and effectively.</p> <p><i>(1 mark for correct answer)</i></p>	CHAPTER-8 PAGE-153	1
		<p align="center">SECTION – B</p> <p align="center">(30 Marks)</p>		
		<p>Answer any 3 out of the given 5 questions (Question No 6 to 10) on Employability Skills in 20 – 30 words each.</p>		3x2=6
	Ans 6.	<p>Lack of communication skills can result in</p> <p>(i) Confusion</p> <p>(ii) Frustration</p> <p>(iii) Wasted efforts</p> <p>(iv) Missed opportunities.</p> <p><i>(1 mark each if any 2 skills/equivalent are written)</i></p>	U-1 Pg-3	2
	Ans 7.	<p>Some techniques are :-</p> <p>(i) Set clear goals/ Smart goal</p> <p>(ii) Prepare an action plan</p> <p>(iii) Use the right resources and tools</p> <p>(iv) Communicate with mentors and peers</p> <p>(v) Make a calendar</p> <p>(vi) Work hard (any four)</p> <p><i>(0.5 mark each/ any other equivalent answer to be considered)</i></p>	U-2 Pg-28	2
	Ans 8.	<p>Four Advantages of presentation software.</p> <p>(i) Have interesting features like images, video, animation and music</p> <p>(ii) Easy to make changes</p> <p>(iii) Can be shown to larger audience by projecting on screen</p> <p>(iv) Can be printed and distributed</p> <p><i>(0.5 mark each/ any other equivalent answer to be considered)</i></p>	U-3 Pg-63	2
	Ans 9.	<p>(i) These are the entrepreneurs, who undertake business and trading activities and are not concerned with the manufacturing work.</p> <p>(ii) They identify the potential of a product in a market.</p> <p><i>(1 mark each for any/equivalent point)</i></p>	U-4 Pg-82	2
	Ans 10.	<p>Green jobs in Eco tourism is intended to provide an experience to visitors to understand the importance of :</p> <p>(i) Conserving resources</p> <p>(ii) Reducing waste</p> <p>(iii) Enhancing the natural environment</p> <p>(iv) Reducing pollution</p>	U-5 Pg-116	2

		(2 marks for correct explanation/equivalent answer)		
		Answer any 4 out of the given 6 questions (Question No 11 to 16) in 20 – 30 words each.		(4 x 2 = 8)
		Name any four evaluation Metrics for Classification.		2
	11.	<p>Answer :</p> <p>Evaluation Metrics</p> <ul style="list-style-type: none"> • Confusion Matrix • Precision • Recall • F1-Score • Accuracy <p>(0.5 mark each for any 4 correct answers)</p>	CHAPTER- 2 PAGE-34	2
	12.	What is the role of preprocessing images in the computer vision process? How is it different from high level processing?		2
	12.	<p>Answer:</p> <p>Preprocessing in computer vision aims to enhance the quality of the acquired image.</p> <ul style="list-style-type: none"> • Decision Making • Object Recognition • Understanding scenes • Analyzing context. <p>While preprocessing images aims to enhance the quality of acquired image, high level processing enables Computers to achieve a deeper understanding of visual content and make informed decisions based on the visual data.</p> <p>(1 mark for correct role)</p> <p>(1 mark for any one correct difference)</p> <p>(2 marks to be given for any other equivalent answer)</p>	CHAPTER- 3 PAGE-49, 50	2
	13.	Mention any two disadvantages/challenges associated with using Big Data.		2
	13.	<p>Answer :</p> <ul style="list-style-type: none"> • Privacy and Security Concerns • Data Quality Issues • Technical Complexity • Regulatory Compliance • Cost & Resource intensiveness <p>(1 mark each for any/equivalent correct disadvantages /challenges)</p>	CHAPTER- 5 PAGE-89	2
	14.	What is a bias term in a neural network? Mention any one of its functions.		2
	14.	Answer :	CHAPTER- 6	2

		<p>A bias in a neural network is a constant added to the weighted sum before applying the activation function.</p> <p><i>(1 mark for correct definition)</i></p> <p>Function : (i) They allows the network to shift the activation function horizontally.</p> <p>(ii) Bias help account for any inherent bias in the data</p> <p><i>(1 mark for any/equivalent one correct function)</i></p>	PAGE-105	
	15.	State any two risks associated with Large Language Models (LLMs) that arise from the training process or the training data.		2
	15.	<p>Answer :</p> <p>(i) Trained on Internet text, LLMs may exhibit biases, and concerns arise regarding data privacy when personal information is processed.</p> <p>(ii) Using sensitive data in training can inadvertently reveal confidential information.</p> <p>(iii) Inputs intentionally crafted to confuse the model may lead to harmful or illogical outputs.</p> <p>(Any two)</p> <p><i>(1 mark each for each correct risk or any equivalent answer)</i></p>	CHAPTER-7 PAGE-130	2
	16.	Define the term Data Storytelling . Mention any one reason why Data Storytelling has become very powerful today.		2
	16.	<p>Answer :</p> <p>Data storytelling is the art and practice of translating complex data and analytics into a compelling narrative that is easily understandable and relatable to various audiences.</p> <p>Reason (Any one)</p> <ol style="list-style-type: none"> It makes the insights and key findings memorable to the audience. It is a persuasive way of communicating key insights and findings to both business stakeholders and technical stakeholders.  <p><i>(1 mark for correct definition. If definition is not accurate then Venn diagram to be considered and given 1 mark, otherwise 0.5 mark for the definition.)</i></p> <p><i>(1 mark for correct reason/ any relevant or equivalent answer)</i></p>	CHAPTER-8 PAGE-150,152	2
		Answer any 3 out of the given 5 questions (Question No 17 to 21) in 50 – 80 words each.		3x4=12
	17.	With reference to the steps of Data Science Methodology , define the process of ' data collection '. Also differentiate		4

		between primary and secondary data sources of data collection with suitable examples.		
	17.	<p>Answer :</p> <p>Data collection is a systematic process of gathering observations or measurements. It involves revising data requirements and deciding if more or less data is needed.</p> <p>Primary data source refers to original data collected firsthand through observation, experimentation, surveys, or interviews. It is raw and unbiased. Examples: marketing campaigns, feedback forms, IoT sensor data.</p> <p>Secondary data source refers to already stored data from books, journals, websites, or databases. Examples: data.gov, World Bank open data, UNICEF, Kaggle, WHO, Google.</p> <p><i>(Explanation of data collection – 1 mark)</i> <i>(Explanation of primary data source- 1mark)</i> <i>Example/ Source – 0.5 mark)</i> <i>(Explanation of secondary data source- 1 mark)</i> <i>Example/ Source – 0.5 mark)</i></p> <p>In case examples are not given then 1.5 marks to be given on correct mentioning of both types of data sources.</p>	CHAPTER – 2 PAGE - 24	4
	18.	List and briefly explain the four steps involved in the working process of Big Data Analytics.		4
	18.	<p>Answer :</p> <p>The four steps involved in the working process of Big Data Analytics are :</p> <ul style="list-style-type: none"> (i) Gather Data : Organizations collect structured and unstructured data from various sources such as cloud storage, mobile apps, and IoT sensors. (ii) Process Data : The collected data is processed using methods like batch processing or stream processing to prepare it for analysis. (iii) Clean Data : Data is scrubbed to remove errors, duplicates, and irrelevant information, ensuring accuracy and quality. (iv) Analyze Data : The cleaned data is analyzed using advanced analytics tools to generate valuable insights and support decision-making. <p><i>(1 mark for each correct step)</i> <i>(2 marks to be given if only names of the steps are mentioned)</i> <i>(No marks to be awarded if any other answer/step is given.)</i></p>	CHAPTER- 5 PAGE-93	4
	19.	Describe the structure of an Artificial Neural Network by explaining its three fundamental layers, and define the role of the weights assigned to each connection between the nodes.		4

19.	<p>Answer :</p> <p>Input Layer : This layer consists of units representing the input fields. Each unit corresponds to a specific feature or attribute of the problem being solved.</p> <p>Hidden Layers : These layers, which may include one or more, are located between the input and output layers. Each hidden layer contains nodes or artificial neurons, which process the input data.</p> <p>Output Layers : This layer consists of one or more units representing the target field(s). The output units generate the final predictions or outputs of the neural network.</p> <p>Role of weights : Each node is connected to others, and each connection is assigned a weight, which represents the strength of connections between neurons.</p> <div></div> <p>(1 mark for each correct layer explanation)</p> <p>(Optional: 1 mark for diagram with labels in case explanation is not accurate)</p> <p>(1 marks for Role of weights)</p>	CHAPTER-6 PAGE-104,105	4									
20.	Differentiate between Generative AI and Discriminative AI based on their purpose, Training Focus, Application, and Models.		4									
20.	<p>Answer :</p> <table><tr><th>Feature</th><th>Generative AI</th><th>Discriminative AI</th></tr><tr><td>Purpose</td><td>Helps create things like images and stories and finds unusual things. It learns from data without needing to be told precisely what to do.</td><td>Helps determine what something is or belongs to by looking at its features. It is good at telling different things apart and making decisions based on that.</td></tr><tr><td>Training Focus</td><td>Tries to understand what makes data unique and how to create new data</td><td>Focuses on learning how to draw lines or make rules to tell other</td></tr></table>	Feature	Generative AI	Discriminative AI	Purpose	Helps create things like images and stories and finds unusual things. It learns from data without needing to be told precisely what to do.	Helps determine what something is or belongs to by looking at its features. It is good at telling different things apart and making decisions based on that.	Training Focus	Tries to understand what makes data unique and how to create new data	Focuses on learning how to draw lines or make rules to tell other	CHAPTER-7 PAGE-126	4
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		<table><tr><td></td><td>that are similar but different.</td><td>things apart based on their features.</td></tr><tr><td>Application</td><td>Helps artists create new artwork, generate new ideas for stories, and find unusual patterns in data.</td><td>Powers things like facial and speech recognition and helps make decisions like whether an email is spam or not.</td></tr><tr><td>Models</td><td>Uses tricks like making things complete against each other or making guesses based on patterns to create new things.</td><td>Learn by finding rules to separate things and recognise patterns, like understanding whether something is a dog or a cat.</td></tr></table> <p>(1 mark for each <i>correct/ equivalent</i> part)</p>		that are similar but different.	things apart based on their features.	Application	Helps artists create new artwork, generate new ideas for stories, and find unusual patterns in data.	Powers things like facial and speech recognition and helps make decisions like whether an email is spam or not.	Models	Uses tricks like making things complete against each other or making guesses based on patterns to create new things.	Learn by finding rules to separate things and recognise patterns, like understanding whether something is a dog or a cat.		
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Models	Uses tricks like making things complete against each other or making guesses based on patterns to create new things.	Learn by finding rules to separate things and recognise patterns, like understanding whether something is a dog or a cat.											
	21.	Define the terms 'Data' and 'Data Visualization'. Explain the uses of the 'Heat Map' and 'Candlestick Chart' visualization types.		4									
	21.	<p>Answer :</p> <p>Data : Data are individual facts, statistics, or items of information, often numeric. In a more technical sense, data is a set of qualitative or quantitative variables about one or more persons or objects. (1 mark)</p> <p>Data Visualization : This is when data, which can be in the simple form of numbers and digits, is pictorially represented in the form of different types of charts or graphs. (1 mark)</p> <p>Heat Map : This compares data across categories using colour to identify strong and weak categories. (1 mark)</p>  <p>Candlestick Chart : This serves as a visual aid for decision-making in stock, forex, commodity and option trading. (1 mark)</p>  <p>Note: If explanation is not accurate then diagram to be considered and only 0.5 mark each to be awarded.</p>	CHAPTER-8 PAGE-149,150,156	4									