

O.P.JINDAL SCHOOL , SAVITRI NAGAR

PRE – BOARD – II (2025-26)

(SET - A)

Class: X
MM: 50

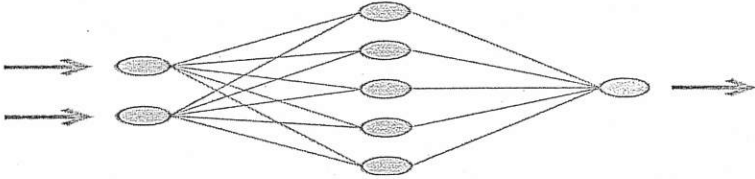
Subject: Artificial Intelligence
Time: 2 hrs.

General Instructions:

1. Please read the instructions carefully
2. This Question Paper consists of 21 questions in two sections Section A & Section B
3. Section A has Objective type questions whereas Section B contains Subjective type questions
4. Out of the given (5+16=) 21 questions, a candidate has to answer (5+10=) 15 questions in the allotted (maximum) time of 2 hours.
5. All questions of a particular section must be attempted in the correct order
6. SECTION A-OBJECTIVE TYPE QUESTIONS (24 MARKS):
 - a. This section has 05 questions.
 - b. Marks allotted are mentioned against each question/part
 - c. There is no negative marking
 - d. Do as per the instructions given.
7. SECTION B-SUBJECTIVE TYPE QUESTIONS (26 MARKS):
 - a. This section has 16 questions
 - b. A candidate has to do 10 questions
 - c. Do as per the instructions given
 - d. Marks allotted are mentioned against each question/part

SECTION A: OBJECTIVE TYPE QUESTIONS

Q.1	Answer any 4 out of the given 6 questions on Employability Skills(1 x 4 = 4 marks)	
i.	Rajni's First Pre-Board Exam is approaching. So She decided to do hardwork and prepared 08 hour preparation schedule to get good marks. Which self-management skill is clearly visible in the given statement?	1
ii.	Sahil, after finishing his exam is showing goodbye expression by waving his hands. Which type of non-verbal communication is used by Sahil? a) Expression b) Body language c) Gesture d) All the above	1
iii.	What keys do you use to replace something? a) Ctrl + C b) Ctrl +V c) Ctrl + X d) Ctrl + H	
iv.	Assertion (A): An Entrepreneur is innovative and hardworking.. Reason(R) : They do this to become richer. a) Both A and R are correct and R is the correct explanation of A b) Both A and R are correct but R is NOT the correct explanation of A c) A is correct but R is not correct d) A is not correct but R is correct	1
v.	Our strengths and weakness, helps us to be identify our: a) Self-motivated b) Self-regulated c) Self-aware d) Emotionally intelligent	1

vi.	Which of the following is Sustainable Development Goal 2? a) No Poverty b) Life below water c) Zero Hunger d) Clean Water, & Sanitation	1
Q.2 Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)		
i.	An AI Application generally shows images for a Driver as a Male person and a Cook as a Female person. Which effect does it show? a) Data privacy b) AI bias c) AI ethics d) AI access	1
ii.	_____ is the ability to communicate with others by understanding other people's feelings. a) Existential Intelligence b) Naturalist Intelligence c) Kinesthetic Intelligence d) Interpersonal Intelligence	1
iii.	Statement 1: Neural Network consists of interconnected nodes or neurons that process and learn from data. Statement 2: It enables tasks such as pattern recognition and decision making. a) Both Statement 1 and Statement 2 are correct b) Both Statement 1 and Statement 2 are incorrect c) Statement 1 is correct but Statement 2 is incorrect d) Statement 2 is correct but Statement 1 is incorrect	1
iv.	In neural network, no processing occurs in _____ layer. (Input/Output/Processing/Hidden)	1
		
v.	What does CSV stand for? a) Comma separated values b) Computer spreadsheet values c) Centralized storage volumes d) Compressed structured variables	1
vi.	The term used for the whole textual data from all the documents altogether is known as _____. a) Complete Data b) Slab c) Corpus d) Cluster	1
Q.3 Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)		

i.	Sports, dancing, acting, role-playing, and exercise are all examples of activities that use the body to learn and integrate movement. Which type of Intelligence does we know about from the above statement. a) Spatial Intelligence b) Kinesthetic Intelligence c) Naturalist Intelligence d) Linguistic Intelligence	1
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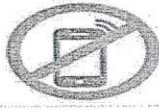
ii.	4W Canvas Problem is related to which stage of Project Cycle?? a) Data Exploration b) Modelling c) Evaluation d) Problem Scoping	1
iii.	An application of AI which uncovers certain words or phrases that signal a spam message is the example of _____. a) Computer Vision b) Data Science c) Natural Language Processing d) All the above	1
iv.	In an Image, if there are more pixels, then resolution will be _____ and the more detailed the image it will be. a) Higher b) Lower c) No effect on Image d) reduced	1
v.	A _____ is a computer program that's designed to simulate human conversation through voice commands or text chats or both. a) Machine Learning b) Chatbot c) Questionnaire d) All the above	1
vi.	Accuracy is defined as the a) Percentage of correct predictions out of all the observations. b) Percentage of true positive cases versus all the cases where the prediction is true. c) Fraction of positive cases that are correctly Identified. d) Fraction of negative cases that are not identified.	1
Q.4	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Shalini come to know that "machines to learn by themselves using the provided data and make accurate Predictions/ Decisions". But she can't able to recollect the term. Help her in finding the correct term.	1
ii.	Statement1: A Confusion Matrix is a table that is often used to describe the performance of a classification model on a set of test data for which the true values are known. Statement2: It is a 2X2 matrix denoting the right and wrong predictions might help us analyse the rate of success. a) Both Statement1 and Statement2 are correct b) Both Statement1 and Statement2 are incorrect c) Statement1 is correct but Statement2 is incorrect d) Statement1 is incorrect but Statement2 is correct	1
iii.	Riyansh want to make an Artificially Intelligent Project which can predict the performance of any student based on his previous marks. He has to feed the data of his previous marks. This is the data with which the machine can be trained. The previous marks data here is known as _____ while the next marks prediction data set is known as the _____. a) Testing Data, Training Data b) Training Data, Testing Data c) Training Data, Next Data d) First Data, Testing Data	1
iv.	In 8-bit integer range values, 0 is to be taken as _____ (Gray/White/Black) color.	
v.	_____ is the process in which the affixes of words are removed and the words are converted to their base form.	1

	a. Stemming b. Stopwords c. Case-sensitivity d. All of the above	
vi.	Imagine a model telling you that there exists treasure at a point and you keep on digging there but it turns out that it is a false alarm. Name the condition in which the model has been deployed. (FP,TP,FN,TN)	1

Q.5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	You would feed the data into the machine. This is the data with which the machine can be trained. Now, once it is ready, it will predict his next data efficiently. This next data is known as _____. a) Training set b) Testing set c) Validation set d) Equal volume of testing and training set.	1
ii.	_____ is the process of understanding the reliability of any AI model, based on outputs by feeding test dataset into the model and comparing with actual answers. a. Evaluation b. Problem Scoping c. Data acquisition d. Data Exploration	1
iii.	TFIDF stands for _____. a. Team Frequency and Inverse Document Frequency b. Term Frequency and Inverse Document Frequency c. Top Frequency and Inverse Document Frequency d. Table Frequency and Inverse Document Frequency	1
iv.	Shivani was learning the confusion matrix conditions . She came across a situation in which the machine that was supposed to predict a cat and was always predicting a cat. So, the predicted value matches the actual value. What is this condition called? a) False Positive b) True Positive c) False Negative d) True Negative	1
v.	_____ can be defined as the measure of balance between precision and recall. a. Recall b. Accuracy c. Precision d. F1 Score	1
vi	The result of comparison between the prediction and reality can be recorded in what we call the _____. a) Overfitting b) Problem Scoping c) Confusion Matrix d) Data acquisition	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks) Answer each question in 20-30 words.

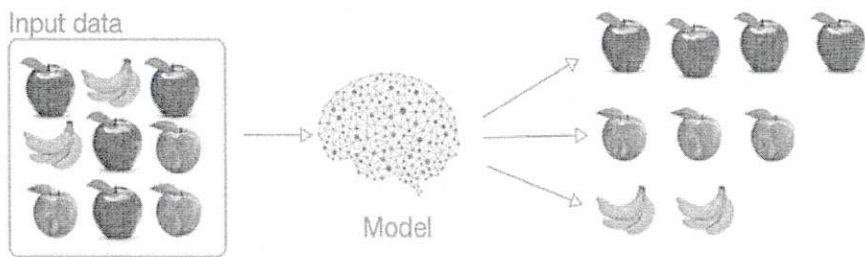
Q. 6	 Name the symbol and also the type of communication uses such symbols. What is the advantage of using that form of communication?	2
Q. 7	Write the four steps for effective Time management.	2
Q. 8	Write few tips to protect your data from online theft and viruses.	2
Q. 9	What are the myths of entrepreneurship? Explain.	2
Q. 10	List some ways in which we can use resources sensibly	2

Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)

Q. 11	What do you understand by AI bias? Discuss in detail with some examples.	2
Q. 12	Read the case study and create a 4W canvas Template. Sarthak is a Class 10 th Student residing in a locality near a big mall. There is a long waiting line for the parking area in the mall. People often park their cars on the roads rather than wait for their turn. This creates traffic problems in that locality.	2
Q. 13	What are the different types of sources of data from where we can collect reliable and authentic datasets? Name any Four.	2
Q. 14	What are Grayscale images?	2
Q. 15	Identify the stem word and lemma for the following tokens? a) Studies, b) Caring	2
Q. 16	What is meant by Overfitting of Data?	2

Answer any 3 out of the given 5 questions in 50 – 80 words each (4 x 3 = 12 marks)

Q. 17	How AI can replace laborious jobs? Is there an alternative for major unemployment?	4
Q. 18	What do you understand by AI, ML & DL? How are they different from each other?	4

Q. 19	Identify the type of learning based approaches in the figure given and also explain its types.	4																	
																			
Q. 20	Create a document vector table for the given corpus: Document 1: Aman and Anil are stressed. Document 2: Aman went to a therapist. Document 3: Anil went to download a health chatbot	4																	
Q. 21	<table border="1" data-bbox="239 721 1108 960"><thead><tr><th>The Confusion Matrix</th><th>Reality: 1</th><th>Reality: 0</th><th></th></tr></thead><tbody><tr><td>Prediction: 1</td><td>50</td><td>20</td><td>70</td></tr><tr><td>Prediction: 0</td><td>10</td><td>20</td><td>30</td></tr><tr><td></td><td>60</td><td>40</td><td>100</td></tr></tbody></table>	The Confusion Matrix	Reality: 1	Reality: 0		Prediction: 1	50	20	70	Prediction: 0	10	20	30		60	40	100	Calculate Accuracy, Precision, Recall and F1 Score for the following Confusion Matrix on AI as Career.	4
The Confusion Matrix	Reality: 1	Reality: 0																	
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