



ST. MARGARET SR. SEC. SCHOOL
MID TERM EXAMINATION 2024-25
ARTIFICIAL INTELLIGENCE (Code-417)
CLASS X -SAMPLE PAPER

Time: 2Hr

M.M: 50

General Instructions:

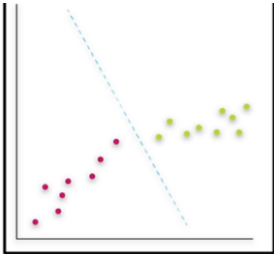
1. Please read the instructions carefully.
2. This Question Paper consists of **18 questions** in two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (5 + 13 =) 18 questions, a candidate has to answer (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. Complete option to be written while answering an MCQ.
7. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
 - i. This section has 05 questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
8. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
 - i. This section has 13 questions.
 - ii. A candidate has to do 10 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q. 1	Answer <i>any 4</i> out of the given 5 questions on Employability Skills (1 x 4 = 4 marks)	
i.	It is the conversation with oneself (a) Interpersonal (b) Intrapersonal (c) private (d) Both (b) and (c)	1
ii.	_____ is the process of transforming weakness into strength and strength into exceptional talent. (a) Self-awareness (b) Self-confidence (c) Self-reliance (d) Self-regulation	1
iii.	What are the two types of verbal communication? (a) Oral and Visual communication (b) Written and Non-verbal communication	1

	(c) Oral and Written communication (d) Visual and Kinesics communication	
iv.	How is yoga an effective tool for stress management? (a) It encourages a good mood. (b) It gives a healthy dose of self-compassion (c) Both (a) and (b) (d) None of these	1
v.	Sara could not prepare for her exams for many reasons such as first her grandfather passed away and then she met with an accident. Now exams are very near and she is having the symptoms like aches, shallow breathing, cold hands and feet. All these symptoms are because of _____ (a) Bad stress (b) Good stress (c) Ailment (d) All of these	1
Q. 2	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	An AI project cycle starts with which of the following activities? (a) Market scoping (b) Resource allocation (c) Problem defining (d) Goal setting	1
ii.	Which of the following is not a task of computer vision? a. Guest Recognition b. Airline Route Plan c. Attendance System d. Instagram Filters	1
iii.	In learning, the dataset is labeled. (a) Transfer learning (b) Unsupervised learning (c) Reinforced learning (d) Supervised learning	1
iv.	During Data Acquisition, feeding previous data into the system is called _____. a. Testing b. Training c. Predicting d. Evaluating	1
v.	A self driving car identifies objects in front of a car using _____ domain. a. Data Science b. NLP c. Computer Vision d. Augmented Reality	1
vi.	Alexa and Siri are common examples of _____. a. Google Search b. Google Maps c. Voice Assistant d. Preferred Recommendations	1
Q. 3	Answer all 5 questions (1 x 5 = 5 marks)	
i.	Name the 4Ws of problem canvas under the Problem Scoping stage of the AI Project Cycle. Choose the correct option: a. Who, What, Where, Why b. Who, What, Where, When c. Who, When, Why, Whom d. Who, What, Why, Whose	
ii.	Inayra is talking about various stages of the AI project cycle. Regarding a stage, she says that in this we collect data for the project. Which stage of the AI project cycle is she talking about?	

	(a) Problem Scoping (b) Data Exploration (c) Data Acquisition (d) Data Modelling	
iii.	Assertion(A): Neural Networks are backbone of deep learning system Reason(R): Neural Network uses very less data. (a) Both A and R are True (b) Only A is True (c) Only R is True (d) Both A and R are False	
iv	Problem scoping the stage where- (a) the problem can be identified and goals can be set (b) the problem can be put on paper (c) the problem can be discussed among stakeholders (d) the problem can be understood by the people	
v	What is the output color when you put R=G=B=255 & R=G=B=0? (a) Black & White (b) Red & Green (c) Green & blue (d) White & Black	
Q. 4	Answer all 5 questions (1 x 5 = 5 marks)	
i.	All images are stored in terms of _____ different channels. a.1 b.3 c.4 d.0	1
ii.	Where does the processing in an ANN occur? (a)Output Layer (b) Hidden Layer (c) Input Layer (d) Data Layer	1
iii.	Aspect ratio in computer vision refers to proportional relationship between the _____ and _____ of an object or image. (a) Width, Height (b) Width, Pixels (c) Height, Intensity (d) Length, Breadth	1
iv.	Radha was searching for new shoes online. Now, she is fed up with mails, pop ups, advertisements related to shoes on her social media accounts, email account and SMS on her phone. This is an issue related to: a. Data Privacy b. Data Acquisition c. Poor Training d. Lack of Access	1
v.	AI technologies can lead to ethical concerns, such as data privacy, _____ and AI access. a. AI Bias b. NLP c. Data Science d. Digital Divide	1
Q. 5	Answer all 5 questions (1 x 5 = 5 marks)	
i.	SQL stands for _____. a.Structured Queue Language b.Structured Query Language c.Scattered Query List d.Scattered Quantum Language	1
ii.	Most frequent value in a sequence is called _____. a.Median	1

	b.Mode c.Mean d.Variance	
iii.	Surveys and Webscapping are methods of Data _____. a. Collection b. Reducing Dimension c. Privacy d. None	1
iv.	“Efforts are made to increase the solar power generation so that our electricity needs are met and at the same time we do not pollute the environment or use up natural resources”. Which SDG can you relate this statement to? a.Life on land b. Clean water and sanitation c.Affordable and clean energy d.Reduced inequalities	1
v.	Identify the algorithm based on the given graph  a.Dimensionality reduction b.Classification c.Clustering d.Regression	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

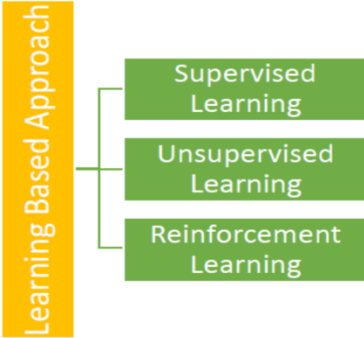
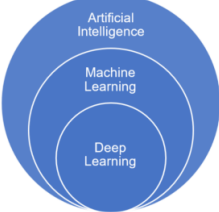
Answer any 3 out of the given 4 questions on Employability Skills (2 x 3 = 6 marks)

Answer each question in 20 – 30 words.

Q. 6	What are common signs of Stress?	2
Q. 7	Name and explain any two components that can make non verbal communication effective.	2
Q. 8	What are various steps for building self-motivation?	2
Q. 9	What is the importance of feedback?	2

Answer any 4 out of the given 5 questions in 20 – 30 words each (2 x 4 = 8 marks)

Q. 10	What is Problem Statement Template. Explain with an example.	2
Q. 11	List any four type of human intelligence. Explain any two.	2
Q. 12	List any four method to collect data.	2
Q. 13	Explain the term resolution with the help of an example.	2

Q. 14	Pick the odd one out and Justify your answer. Instagram Filters, Face lock in Smartphone , Chatbot, Image search option	2
Answer any 3 out of the given 4 questions in 50– 80 words each (4 x 3 = 12 marks)		
Q.15	<p>Explain the chart given below in detail.</p> 	4
Q.16	“AI is making people’s lives easier”. Explain in detail.	4
Q.17	 <p>a.Explain in detail the relation between AI,Machine Learning and Deep learning. b.What is Problem Scoping?</p>	4
Q.18	_____ networks are loosely modelled after how neurons in the human brain behave. Complete the above sentence and explain the network discussed in the above sentence in detail.	4