

CLASS X (SESSION 2023-2024)

MID TERM EXAMINATION

Max. Time Allowed: 2 Hrs

Max. Marks: 50

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):
 - 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.
7. SECTION B - SUBJECTIVE TYPE QUESTIONS (26 MARKS):
 - i. This section has 16 questions.
 - ii. A candidate has to attempt 10 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)

i.	Which of the following is not an element of communication process cycle? (a) Channel (b) Receiver (c) Sender (d) Time	1
ii.	_____ tasks' means categorising tasks into "very urgent", "urgent", "not so urgent" etc. (a) Short Term (b) Planning (c) Prioritizing (d) All of these	1
iii.	Which of the following function is not a way to protect data? (a) Password (b) Antivirus and Firewall (c) Trojan horse (d) Secured sites	1
iv.	Which of these does not come under software maintenance? (a) Cleaning of Keyboard (b) Protection against viruses (c) Removing temporary files (d) Performing anti-virus scan	1
v.	Which of the following is a myth related to entrepreneurship? (a) Need a lot of money (b) Have a great idea (c) Should know everything about business (d) All of these	1
vi.	What qualities do you think, Ravneet possesses as she is a successful mushroom farming entrepreneur? (a) Ravneet can take risks and mitigate them (b) Ravneet possesses team building skills (c) Ravneet delegates task and authority (d) All of these	1
Answer any 5 out of the given 6 questions.		(1 x 5 = 5 marks)
i.	Which of these actions doesn't require intelligence? (a) Identifying false news (b) Watching TV (c) Teaching students (d) Driving Cars	1
ii.	Which of the following is not an example of AI? (a) Smart AC (b) Self-Driving Car (c) Alexa (d) Google Lens	1
iii.	You called a company's customer care office. An application there responded you, spoke to you, asked broadly about your issue and then transferred your call to appropriate department. This is an	1

	example of _____ technology of AI. (a) Machine Learning (b) Big data (c) NLP (d) Data Science	
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iv.	A company used a system for recruitment, creating a situation in which many eligible women were left out of the consideration. What is this known as? (a) Misinterpretation of data (b) Problem of inclusion (c) Gender bias (d) Data Privacy	1
v.	Price comparison websites are related to which domain of AI? (a) Artificial Intelligence (b) Machine learning (c) Deep learning (d) Data science	1
vi.	Which of the following uses Computer Vision domain predominantly? (a) Email Spam Filter (b) Google Photos (c) Google Translator (d) Smart Bots	1
Q3	Answer any 5 out of the given 6 questions.	5 marks)
i.	Which of the following technology is an adaption of how human brain works? (a) Super Networks (b) Smart Technology (c) Neural Networks (d) Wide Area Networks	1
ii.	The fourth stage of an AI project cycle is Modelling. (True/False)	1
iii.	Which of the following is reward based learning? (a) Supervised Learning (b) Unsupervised Learning (c) Reinforcement Learning (d) Deep Learning	1
iv.	The following technique lets us understand and analyze data in a better way: (a) Data Acquisition (b) Data Classification (c) Data Visualization (d) Data Optimization	1
v.	The top node or the beginning of the decision tree is called (a) Interior Node (b) Root Node (c) Leaf Node (d) Child Node	1

vi.	Which of the following is an example of structured data? (a) Videos (b) Emails (c) CSV files (d) Presentations	1
Answer any 5 out of the given 6 questions. (Competency Based)		5 marks)
i.	Aarvi has great rhythm, a knack for creating, singing or playing melodies. At a young age she has created many compositions and won many awards. She possesses _____ intelligence. (a) Logical (b) Musical (c) Linguistic (d) Bodily-kinesthetic	1
ii.	Ms. Khushi, a computer science teacher at Kendriya Vidyalaya, has developed an educational humanoid namely Ammu, which can converse in 47 languages. Which AI technology helps Ammu, the robot, converse with us humans ? (a) NLP (b) Computer Vision (c) ML (d) Data Science	1

iii.	The Meta company's (formerly Facebook) artificial intelligence team recently trained an image recognition model to 85% accuracy using billions of public Instagram photos tagged with hashtags. The technology behind this model is _____. (a) Computer Vision (b) NLP (c) Data (d) All of these	1
iv.	_____ is a technology that can generate fake digital media looking as original as possible. (a) Deep Learning (b) Deep fake (c) Fakedeep (d) All of these	1
v.	In an AI based model the machine is trained with huge amounts of data, called _____, which helps it in training itself around the data. (a) Machine learning (b) Artificial Intelligence (c) Training Data (d) Deep fake	1
vi.	A given AI model is _____ if the outputs are independent of sensitive parameters (e.g., gender, race, sexuality, religious faith, disability, etc.) for a specific task that is already affected by social discrimination. (a) Biased (b) Ethical (c) Fair (d) Both (b) and (c)	1
Answer any 5 out of the given 6 questions.		5 marks)

i.	_____ involves collecting data from various authentic sources such as reliable websites, observations, surveys. (a) Data Acquisition (b) Data Evaluation (c) Data Testing (d) Data Modelling	1
ii.	In this stage of AI Project Cycle, AI algorithms are developed around the final AI-model. Which stage is this? (a) Data Acquisition (b) Data Exploration (c) Modelling (d) Evaluation	1
iii.	In _____ block of 4Ws Canvas, the focus is on the context/situation/location of the problem. (a) What (b) Why (c) Who (d) Where	1
iv.	The _____ block of 4Ws Problem Canvas helps in analysing the people getting affected directly or indirectly due to it. (a) Who (b) What (c) Where (d) Why	1
v.	_____ is one of the types of supervised learning model, where data is classified according to labels and data need not be continuous. (a) Regression (b) Classification (c) Clustering (d) Dimensionality reduction	1
vi.	_____ refers to the unsupervised learning algorithm which can cluster the unknown data according to the patterns or trends identified out of it. (a) Regression (b) Classification (c) Clustering (d) Dimensionality reduction	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.

Q6	What are some stress management techniques?	2
Q7	How do you copy files from one folder to another?	2
Q8	Shilpa's computer has suddenly become very slow and non-responsive. She feels that her computer has been infected with a virus. Write any two ways Shilpa can follow to protect her computer from viruses.	2
Q9	What are the different qualities of successful entrepreneurs?	2
Q10	What is S.M.A.R.T. goal setting?	2

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

Q11	Write a short note on Machine Learning.	2
Q12	What is the purpose of Problem statement template in 4Ws?	2
Q13	Differentiate between Classification and Regression.	2
Q14	What are the authentic sources of Data collection?	2
Q15	How is Education field benefitting from AI?	2
Q16	Give examples of some applications of AI where Computer Vision is primarily used.	2

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

Q17	What are the different domains of AI?	4
Q18	Explain the AI Project Cycle in detail.	4
Q19	What is AI Bias? Give some examples of AI bias.	4
Q20	What is the difference between the rule based and learning based AI model?	4
Q21	What is Artificial Neural Network? Discuss some common applications of neural networks.	4
