

27.06.25✓



Delhi Public School, Howrah

PERIODIC TEST I(2025-2026)

Class – XI

Care must be taken not to write anything on the question paper. All the questions must be attempted in the correct sequence.

SUBJECT: ARTIFICIAL INTELLIGENCE (SUBJECT CODE-843)

Time Allowed: -2 Hours

F.M.-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 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 any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)	
i.	You are leading a team project, but a team member is struggling with confidence issues at work. Which of the following will help him build self-confidence? A) Ignoring feedback B) Learning from mistakes C) Avoiding challenges D) Comparing with others	(1)
ii.	Which method of communication is most effective in expressing emotions? A) Written communication B) Verbal communication C) Non-verbal communication D) Digital communication	(1)
iii.	A company wants to hire employees with strong self-management skills. What characteristic best describes such individuals? A) Dependence on external motivation B) Ability to prioritize tasks and stay disciplined C) Avoiding responsibility for mistakes D) Focusing only on personal goals	(1)
iv.	A student wants to improve their time management. Which of the following strategies would be most effective? A) Multitasking without a clear plan B) Setting SMART goals and prioritizing tasks C) Ignoring deadlines to reduce pressure D) Completing easy tasks, delaying the difficult ones	(1)
v.	Which of the following communication barriers affects international business the most? A) Cultural differences B) Personal grooming C) Physical distance D) Motivation levels	(1)
vi.	The AEIOU model in communication is primarily used for: A) Expressing emotions B) Saying "No" assertively C) Writing formal emails D) Improving public speaking	(1)

Q. 2	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	A retail store wants to improve customer experience using AI-powered chatbots. Which AI technology is best suited for this purpose? A) Machine Learning B) Natural Language Processing C) Computer Vision D) Expert Systems	(1)
ii.	A smart home system adjusts room temperature based on past user preferences. Which stage of the AI project cycle involves collecting such data? A) Problem Scoping B) Data Acquisition C) Modeling D) Deployment	(1)
iii.	An AI model predicts stock market trends using past data patterns. Which learning method does it rely on? A) Unsupervised learning B) Reinforcement learning C) Supervised learning D) Deep learning	(1)
iv.	Which of the following best describes the role of stakeholders in an AI project? A) Only AI developers B) Individuals who benefit from the solution C) People who create AI algorithms D) Employees working in different departments	(1)
v.	A hospital installs AI-based diagnostic tools to detect diseases in medical scans. This is an application of: A) Computer Vision B) Natural Language Processing C) Expert Systems D) Data Science	(1)
vi.	A business wants to use AI analytics to improve customer retention. Which step in the AI project cycle should they focus on? A) Data Acquisition B) Modeling C) Deployment D) Problem Scoping	(1)

Q. 3	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	A hospital wants to reduce patient waiting time using AI. Which type of AI system should they use? A) Reactive Machines B) Limited Memory C) Self-aware AI D) Narrow AI	(1)
ii.	A school uses facial recognition to automate attendance. What type of AI application is this? A) Expert System B) Natural Language Processing C) Computer Vision D) Robotics	(1)
iii.	Which of these tasks would be best performed by Artificial Narrow Intelligence (ANI)? A) Solving moral dilemmas B) General reasoning like a human C) Diagnosing diseases based on symptoms D) Feeling emotions	(1)
iv.	A smart assistant like Alexa struggles to answer a complex philosophical question. This is because it lacks: A) Programming B) Reactive memory C) Artificial General Intelligence D) Sensors	(1)
v.	What makes an AI chatbot effective in handling customer complaints? A) Pre-recorded answers B) Sentiment analysis and NLP C) Robotic hardware D) Rule-based commands only	(1)
vi.	State whether the following statement is TRUE or FALSE. Rewrite the correct statement if false: Media content producers are using AI software to improve the speed and efficiency of the media production process.	(1)

Q. 4	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	_____ algorithm predicts the output values based on input features from the data fed in the system. A) Regression B) Clustering C) Classification D) Deep Learning	(1)
ii.	Which of the following is an ethical concern in deploying AI surveillance tools? A) High accuracy B) Reduced manual effort C) Data privacy violation D) Real-time updates	(1)
iii.	Why is AI used in fraud detection systems in banks? A) To increase paperwork B) To reduce employee salaries C) To detect patterns and anomalies in transactions D) To entertain users	(1)

iv.	Which AI capability is essential in a language translation app? A) Robotics B) Speech Synthesis C) Natural Language Processing D) Image Recognition	(1)
v.	A mobile app recommends music based on your listening history. This is an example of: A) AI in education B) Machine learning in entertainment C) NLP in finance D) Robotics in automation	(1)
vi.	Riya wants to become an AI Product Manager. Which skill is most essential for her role? A) Medical diagnosis B) Story writing C) Business strategy and communication D) Interior design	(1)

Q. 5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Which of the following roles involves preparing data and selecting models? A) AI Ethicist B) Data Scientist C) AI Product Manager D) Customer Service Agent	(1)
ii.	A company wants to make AI systems fair and unbiased. Who should they consult? A) AI Software Engineer B) Data Entry Operator C) AI Ethicist D) Network Administrator	(1)
iii.	Which soft skill is crucial when working in an AI project team? A) Solo working B) Competitive spirit C) Collaboration and communication D) Speed typing	(1)
iv.	Why is interdisciplinary knowledge important in AI careers? A) It adds entertainment value B) AI systems interact with diverse domains like healthcare, law, etc. C) It helps in memorizing facts D) It is required only for coding	(1)
v.	An AI solution fails because the training data was biased. What principle was violated? A) Explainability B) Accuracy C) Fairness D) Creativity	(1)
vi.	What is a likely job responsibility of a Machine Learning Engineer? A) Writing user guides B) Building ML models and deploying them C) Selling AI hardware D) Testing mobile apps manually	(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	A student is struggling with procrastination. Suggest two effective self-management strategies to help them stay productive.	(2)
Q. 7	Explain how effective communication can improve team collaboration in a corporate environment.	(2)
Q. 8	How does SMART goal-setting enhance productivity in workplace settings?	(2)
Q. 9	A business leader wants to build a strong, motivated team. What two self-motivation techniques can help employees stay engaged?	(2)
Q.10	Compare verbal and non-verbal communication in terms of effectiveness in professional environments.	(2)

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

Q.11	A city plans to reduce traffic congestion using AI technology. Suggest two AI-based solutions to help achieve this.	(2)
Q.12	A healthcare company is developing an AI-powered system to detect diabetic retinopathy from retinal scans. Which AI method would be most suitable for this task, and how would you implement it?	(2)
Q.13	Explain the importance of Problem Scoping in AI projects.	(2)
Q.14	How does Machine Learning improve real-world applications like fraud detection in banking?	(2)
Q.15	"Nowadays, systems based on neural networks are being widely used in the healthcare industry." Comment.	(2)

Q.16	Suggest two ways AI can help improve customer service in e-commerce platforms.	(2)
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Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)

Q.17	Explain how Perception plays a role in AI systems such as self-driving cars and facial recognition.	(4)
Q.18	A bank wants to: a. Predict loan defaults using historical customer data. b. Identify unusual transaction patterns. c. Optimize investment strategies through trial and error. d. Analyze customer feedback sentiment. Which type of learning would they use for each task?	(4)
Q.19	How does fault tolerance in AI systems improve their reliability in real-world scenarios?	(4)
Q.20	A facial recognition system is being developed to identify individuals in security footage. What role would feature extraction play in this AI model, and why is it crucial for accurate recognition?	(4)
Q.21	A company wants to use AI for automated recruitment. What AI technologies should they implement, and why?	(4)