

ARTIFICIAL INTELLIGENCE – CLASS X

SUBJECT CODE: 417

TIME: 2 HOURS

MAXIMUM MARKS: 50

General Instructions:

TOTAL NO OF PAGES - 4

This question paper contains two sections – Section A and Section B.

Section A consists of objective-type questions carrying 1 mark each.

Section B consists of subjective-type questions.

Read all questions carefully before answering.

Attempt questions as instructed.

SECTION – A

OBJECTIVE TYPE QUESTIONS

24 × 1 = 24 MARKS

- Q1. Which of the following is an example of non-verbal communication?
a) Email ~~b)~~ Facial expression c) Telephone conversation d) Written notice
- Q2. The process of exchanging information, ideas and feelings between two or more people is called:
~~a)~~ Communication b) Motivation c) Self-management d) Entrepreneurship
- Q3. Which of the following is an important characteristic of effective communication?
a) Ambiguity ~~b)~~ Clarity c) Confusion d) Distraction
- Q4. Which of the following helps a person manage time effectively?
a) Procrastination ~~b)~~ Preparing a schedule c) Avoiding deadlines d) Multitasking unnecessarily
- Q5. The ability to remain calm and positive during difficult situations is known as:
~~a)~~ Stress management b) Entrepreneurship c) Communication d) Data acquisition
- Q6. Which of the following is a SMART goal?
a) I will study someday. b) I want to improve.
~~c)~~ I will complete two chapters by Friday. d) I will become successful.
- Q7. Which shortcut key is generally used to copy selected text or files?
a) Ctrl + X ~~b)~~ Ctrl + C c) Ctrl + V d) Ctrl + Z
- Q8. Which of the following is used to protect an online account?
a) Weak password b) Sharing OTP ~~c)~~ Strong password d) Public password
- Q9. Which of the following is an example of cloud storage?
~~a)~~ Google Drive b) Keyboard c) Monitor d) Printer

- Q10. A program designed to detect and remove harmful software is called:
☒ a) Antivirus b) Spreadsheet c) Browser d) Compiler
- Q11. An entrepreneur is a person who:
a) Only works for others ☒ b) Starts and manages a business venture
c) Avoids taking decisions d) Never takes risks
- Q12. Which quality is important for an entrepreneur?
a) Lack of confidence ☒ b) Creativity c) Fear of change d) Carelessness
- Q13. The ability to generate new and useful ideas is called:
☒ a) Creativity b) Stress c) Communication barrier d) Procrastination
- Q14. A person who identifies an opportunity and converts it into a business idea is demonstrating:
☒ a) Entrepreneurial ability b) Poor time management c) Passive communication d) Data loss
- Q15. Which of the following is the correct first stage of the AI Project Cycle?
a) Evaluation ☒ b) Problem Scoping c) Data Exploration d) Modelling
- Q16. In which stage of the AI Project Cycle is relevant data collected?
☒ a) Data Acquisition b) Evaluation c) Modelling d) Problem Scoping
- Q17. The process of understanding and finding patterns in collected data is known as:
☒ a) Data Exploration b) Problem Scoping c) Evaluation d) Deployment
- Q18. Which stage involves creating an AI model using the available data?
a) Problem Scoping b) Data Acquisition ☒ c) Modelling d) Evaluation
- Q19. The final performance of an AI model is checked during:
a) Data Acquisition ☒ b) Evaluation c) Problem Scoping d) Data Exploration
- Q20. A model in AI is mainly used to:
a) Store electricity ☒ b) Make predictions or decisions using data c) Print documents d) Create passwords
- Q21. Which type of AI model is commonly used when the output belongs to a category or class?
☒ a) Classification model b) Regression model c) Drawing model d) Storage model
- Q22. Predicting the price of a house based on its area is an example of:
a) Classification ☒ b) Regression c) Clustering d) Encryption
- Q23. In supervised learning, the training data:
a) Has no information ☒ b) Contains labelled examples c) Is always deleted d) Contains only images
- Q24. Which of the following is an example of classification?
a) Predicting tomorrow's temperature b) Predicting the price of a car
☒ c) Identifying an email as spam or not spam d) Predicting a person's height

SECTION – B

1. SHORT ANSWER TYPE QUESTIONS – ATTEMPT ANY 7

7 × 2 = 14 MARKS

- Q25. What is active listening? Mention any one benefit of active listening.
- Q26. State any two ways by which stress can be managed effectively.
- Q27. What is the importance of setting goals? Mention any one characteristic of a good goal.
- Q28. Mention any two precautions that should be followed while using the Internet.
- Q29. Define entrepreneurship. Write any one quality of a successful entrepreneur.
- Q30. What is Problem Scoping? Why is it important in an AI project?
- Q31. Differentiate between Data Acquisition and Data Exploration.
- Q32. What is an AI model? Give one example of an AI model used in daily life.
- Q33. Differentiate between classification and regression with one example of each.
- Q34. What is training data? Why is it important for an AI model?

2. LONG ANSWER – ATTEMPT ANY 3

3 × 4 = 12 MARKS

Q35. Read the situation carefully and answer the questions that follow:

Riya has to complete her school project, prepare for a test and participate in a group activity. She keeps postponing her work and becomes stressed when deadlines approach.

- a) Identify one self-management problem faced by Riya. b) Suggest any two ways by which she can manage her time effectively. c) How can setting priorities help Riya?

OR

Q35. Aman is presenting an idea in front of his class. He speaks very quickly, does not maintain eye contact and does not listen to questions carefully.

- a) Identify two communication problems in the situation. b) Suggest two ways in which Aman can improve his communication skills.

Q36. Read the case study and answer the questions that follow:

Bal Bhawan School wants to develop an AI-based system that can help identify students who may require additional academic support. The school plans to collect relevant academic data, study the data and develop an AI model.

- a) Which stage of the AI Project Cycle involves identifying and defining the problem?
- b) Which stage involves collecting relevant student data? c) What is Data Exploration? d) Why should the collected data be relevant and reliable?

Q37. Read the case study and answer the questions that follow:

A school wants to develop an AI system that can classify student feedback into three categories: Positive, Neutral and Negative.

- a) What type of AI problem is this?
- b) Which type of model would be appropriate for this problem?
- c) Why is this problem not a regression problem?

d) Give one other real-life application of classification.

Q38. Read the case study and answer the questions that follow:

A company wants to develop an AI system to predict the selling price of houses. It has information about the area of the house, number of rooms, location and age of the house.

- a) Is this a classification or regression problem?
- b) Give reason for your answer.
- c) Identify any two features that could be used by the model.
- d) What would be the output of the model?

Q39. A school is developing an AI-based attendance monitoring system. The project team follows these steps:

Identifies the attendance-related problem.

Collects attendance and relevant student data.

Studies patterns in the collected data.

Develops an AI model.

Checks how well the model performs.

Answer the following:

- a) Name the five stages represented above.
- b) Why is evaluation important after developing an AI model?
- c) What may happen if poor-quality data is used for training the model?

Q40. A food delivery company wants to predict the delivery time for an order using distance, traffic conditions, weather and time of day.

- a) What type of AI would be suitable for predicting delivery time?
- b) Give reason for your answer.
- c) Identify any two input features.
- d) State one difference between classification and regression.