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SCO INTERNATIONAL OLYMPIAD

CLASS 6 AI OLYMPIAD
OFFICIAL QUESTION PAPER

A PDF-ready assessment resource for students, teachers, schools, and parents

Designed from Class 6 AI literacy pathways and aligned with SCO's platform flow for guided preparation, practice, reporting, and responsible future-ready learning.

- age-fit AI literacy guidance for Grade 6 / upper-primary learners globally
- question pathways across AI, machine learning, data, patterns, privacy, ethics, and real-life applications
- preparation roadmap, school implementation ideas, and future-ready skill framing for responsible AI learning

AI	Machine Learning	Data	Patterns	Real-Life AI
Privacy	Ethics	Safety	Achievers	Practice

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SCO International Artificial Intelligence Olympiad - Class 6

Field	Details
Exam Name	SCO International Artificial Intelligence Olympiad
Class / Grade	Class 6 / Grade 6
Question Paper Set	A
Duration	60 minutes
Type of Exam	Objective Type / Multiple Choice Questions
Number of Questions	35 questions
Sections	4 sections: Understanding AI and Machine Learning; Data and Pattern Recognition; Real-Life AI Examples; Achievers Section

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Understanding AI and Machine Learning

Q.1 **Which statement best explains Artificial Intelligence for a Grade 6 learner?**

Understanding AI and Machine Learning

A. AI means every machine is alive like a human.
B. AI means a machine can learn from data and make useful decisions.
C. AI means the internet works only on robots.
D. AI means a computer never needs instructions.

Answer: B

Explanation: AI is not alive, but it can be designed to learn from examples, recognize patterns, and help people make decisions.

Q.2 **A music app suggests songs similar to the ones a student listens to often. What is the app most likely using?**

Understanding AI and Machine Learning

A. Random guessing only
B. Only a paper timetable
C. Machine learning from user choices
D. A calculator formula with no data

Answer: C

Explanation: A recommendation app studies past choices and finds patterns. This is a common real-life use of machine learning.

Q.3 **In machine learning, why are examples important?**

Understanding AI and Machine Learning

A. They help the computer find patterns.
B. They make the screen brighter.
C. They stop the computer from using memory.
D. They remove the need for testing.

Answer: A

Explanation: A machine learning model improves by studying examples, such as pictures, words, numbers, or user choices.

Q.4 **Which task is a good example of classification?**

Understanding AI and Machine Learning

A. Adding two numbers
B. Changing the color of a webpage
C. Opening a folder
D. Predicting whether an email is spam or not spam

Answer: D

Explanation: Classification means putting something into a category. Spam/not spam is a two-category decision.

Q.5 **Which task is a good example of regression?**

Understanding AI and Machine Learning

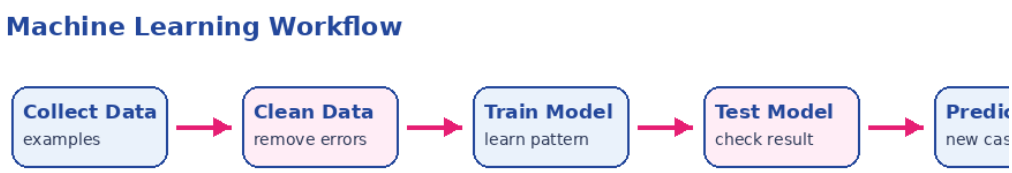
A. Sorting animals into mammals and birds
B. Predicting tomorrow's temperature in degrees
C. Checking whether a password is correct
D. Choosing a button color

Answer: B

Explanation: Regression predicts a number. Temperature, price, height, and marks are numerical outputs.

Q.6 **Look at the machine learning workflow diagram. Which step should usually happen before training a model?**

Understanding AI and Machine Learning



A. Clean and prepare the data
B. Announce the final result first
C. Delete all examples
D. Avoid checking errors

Answer: A

Explanation: Data should be collected and cleaned before training so that the model learns from correct and useful examples.

Q.7 **A student shows a computer many pictures labeled “cat” and “dog.” The computer learns to identify new pictures. What type of learning is this?**

Understanding AI and Machine Learning

A. Unsupervised learning
B. No learning
C. Supervised learning
D. Manual drawing

Answer: C

Explanation: The examples have labels, so the learning is supervised. The labels guide the computer.

Q.8 **A computer groups similar toy pictures without being told their names. What type of learning is this?**

Understanding AI and Machine Learning

A. Supervised learning
B. Keyboard learning
C. Calculator learning
D. Unsupervised learning

Answer: D

Explanation: Unsupervised learning finds groups or patterns in data without given labels.

Q.9 **Which is a responsible way to use AI in schoolwork?**

Understanding AI and Machine Learning

A. Use AI as a learning helper and check the answer.
B. Copy everything without understanding.
C. Hide that AI was used when asked to explain.
D. Use AI to submit someone else’s work.

Answer: A

Explanation: AI can support learning, but students should understand, verify, and use it honestly.

Q.10 **Why can an AI model make mistakes?**

Understanding AI and Machine Learning

- **A.** It always knows everything.
- **B.** It may learn from incomplete, wrong, or biased data.
- **C.** It can read minds.
- **D.** It never needs testing.

Answer: **B**

Explanation: AI depends on training data and design. If data is weak or unfair, predictions can be wrong.

Data and Pattern Recognition

Q.11 **Which of these is data?**

Data and Pattern Recognition

- **A.** A blank wall with no information
- **B.** A pencil with no label
- **C.** A list of daily temperatures
- **D.** A closed empty box

Answer: **C**

Explanation: Data is information that can be observed, recorded, or measured, such as numbers, words, or images.

Q.12 **A table has one missing value and one impossible score of 200 out of 100. What should be done before using it for AI?**

Data and Pattern Recognition

Data Around Us: Clean vs Noisy Data

Student	Hours	Quiz Score	Clean?
A	2	70	Yes
B		88	Missing hour
C	3	200	Wrong score
D	1	62	Yes

- **A.** Print it without checking
- **B.** Make all numbers 200
- **C.** Use it only for drawing
- **D.** Clean the data

Answer: **D**

Explanation: Missing or impossible values should be corrected or handled before training an AI model.

Q.13 **Which data type is best for storing “Rainy” or “Sunny”?**

Data and Pattern Recognition

- **A.** Text/category data
- **B.** Decimal number only
- **C.** Image pixel only
- **D.** Sound only

Answer: **A**

Explanation: Weather labels such as Rainy or Sunny are categories, often stored as text labels.

Q.14 **A camera-based AI sees many pictures of leaves and learns to separate healthy leaves from unhealthy leaves. What kind of data is being used?**

Data and Pattern Recognition

- **A.** Only audio data
- **B.** Image data
- **C.** Password data
- **D.** Currency data

Answer: **B**

Explanation: Pictures are image data. Computer vision systems use image data to detect features and patterns.

Q.15 **The number sequence 2, 4, 6, 8, __ follows which pattern?**

Data and Pattern Recognition

- **A.** Multiply by 5 each time
- **B.** Subtract 4 each time
- **C.** Add 2 each time
- **D.** No pattern

Answer: **C**

Explanation: The sequence increases by 2, so the missing number is 10.

Q.16 **Why is a training set used in machine learning?**

Data and Pattern Recognition

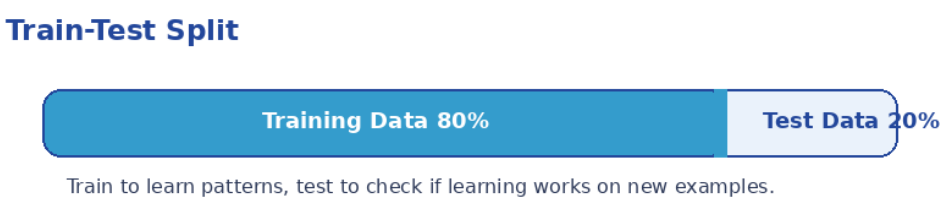
- **A.** To decorate the computer screen
- **B.** To erase all examples
- **C.** To avoid learning
- **D.** To help the model learn patterns

Answer: **D**

Explanation: The training set contains examples from which the model learns.

Q.17 **Why is a test set used after training?**

Data and Pattern Recognition



- **A.** To check how the model works on new examples
- **B.** To make the model forget everything
- **C.** To rename the computer
- **D.** To reduce the number of questions

Answer: **A**

Explanation: A test set helps check whether the model can generalize to examples it has not seen before.

Q.18 **If an AI model performs well on practice data but poorly on new data, what might be happening?**

Data and Pattern Recognition

- **A.** Good generalization
- **B.** Overfitting
- **C.** Perfect learning
- **D.** No pattern recognition

Answer: **B**

Explanation: Overfitting means the model memorized practice examples instead of learning patterns that work on new examples.

Q.19 **Which of these is the best example of a feature for predicting whether a student may need extra practice?**

Data and Pattern Recognition

- **A.** Favorite cartoon character only
- **B.** Shoe color only
- **C.** Number of correct answers in past quizzes
- **D.** Seat number only

Answer: **C**

Explanation: Past quiz performance is related to learning progress, so it is a useful feature.

Q.20 **Which action improves data quality?**

Data and Pattern Recognition

- **A.** Adding random wrong values
- **B.** Deleting all labels
- **C.** Mixing names without consent
- **D.** Removing duplicate records and correcting spelling mistakes

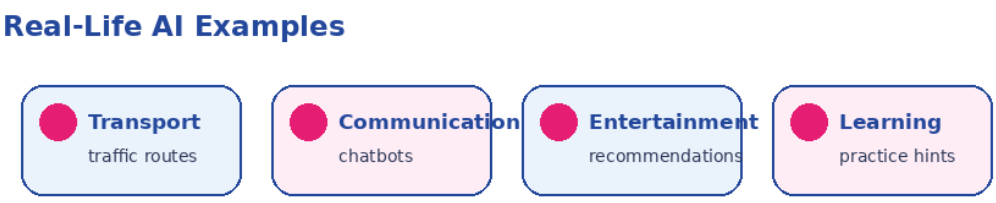
Answer: **D**

Explanation: Data cleaning improves quality by fixing errors, duplicates, and unclear entries.

Real-Life AI Examples

Q.21 **Which of the following is an example of AI in transportation?**

Real-Life AI Examples



- **A.** A navigation app suggesting a faster route
- **B.** A pencil drawing a map by itself
- **C.** A book closing automatically
- **D.** A chair moving because of wind

Answer: **A**

Explanation: Navigation apps use data about roads, traffic, and location to suggest useful routes.

Q.22 **Which AI example helps in communication?**

Real-Life AI Examples

A. A spoon mixing soup
B. A chatbot answering simple questions
C. A paper calendar
D. A normal light switch

Answer: **B**

Explanation: Chatbots use language processing to understand questions and provide responses.

Q.23 **A video app suggests cartoons based on earlier videos watched. Which AI application is this?**

Real-Life AI Examples

A. Weather forecasting only
B. Battery charging
C. Recommendation system
D. Manual counting

Answer: **C**

Explanation: Recommendation systems study preferences and suggest similar or useful items.

Q.24 **Which example shows AI in education?**

Real-Life AI Examples

A. A clock showing the time
B. A pencil writing only when pushed
C. A plain notebook
D. A learning app giving practice questions based on mistakes

Answer: **D**

Explanation: AI learning platforms can adapt practice based on a student's performance.

Q.25 **Which example shows AI helping the environment?**

Real-Life AI Examples

A. AI analyzing satellite images to detect forest loss
B. A plastic bottle on a table
C. A random alarm sound
D. A non-digital poster

Answer: **A**

Explanation: AI can process images and sensor data to monitor environmental changes.

Q.26 **In healthcare, why should AI advice be checked by trained professionals?**

Real-Life AI Examples

A. Because AI is always a doctor
B. Because health decisions can affect safety and AI may be wrong
C. Because students should avoid science
D. Because hospitals never use technology

Answer: **B**

Explanation: Healthcare decisions need human expertise because AI is a support tool, not a replacement for medical professionals.

Q.27 **A smart speaker understands a voice command. Which type of AI ability is mainly involved?**

Real-Life AI Examples

A. Measuring a ruler
B. Printing a page
C. Speech and language processing
D. Painting a wall

Answer: C

Explanation: Smart speakers use speech recognition and language understanding to respond to voice commands.

Q.28 **A camera detects whether a person is wearing a helmet. Which AI area is most relevant?**

Real-Life AI Examples

A. Spreadsheet sorting only
B. Handwriting with pencil
C. Manual counting only
D. Computer vision

Answer: D

Explanation: Computer vision helps machines understand images and video.

Q.29 **Which statement about AI and jobs is most balanced?**

Real-Life AI Examples

A. AI can automate some tasks and also create new skill needs.
B. AI removes the need for all people.
C. AI is never used at work.
D. AI can only play games.

Answer: A

Explanation: AI changes the way people work, so future-ready skills and responsible use are important.

Q.30 **Which action is safest when using an AI app?**

Real-Life AI Examples

A. Share passwords to get faster answers.
B. Read the privacy notice and avoid sharing unnecessary personal details.
C. Upload private photos without permission.
D. Use any app without checking who created it.

Answer: B

Explanation: Students should protect personal data and use trusted tools responsibly.

Achievers Section

Q.31 **A mini AI game asks the player to classify fruits by color and shape. Which pair of features is most useful?**

Achievers Section

A. Shoe size and house number
B. Favorite song and school bus number
C. Color and shape
D. Random password and pencil length

Answer: C

Explanation: Features should be relevant to the prediction or grouping task. Color and shape help classify fruits.

Q.32 **A model gives 18 correct answers out of 20 test examples. What is its accuracy?**

Achievers Section

A. 90%
B. 80%
C. 70%
D. 60%

Answer: A

Explanation: Accuracy = correct answers / total examples = 18/20 = 0.9 = 90%.

Q.33 **A student creates a dataset of animal pictures but includes only dogs. What problem may occur?**

Achievers Section

A. The model will understand every animal perfectly.
B. The model will not need data.
C. The model becomes a calculator.
D. The model may not learn to recognize other animals.

Answer: D

Explanation: A dataset should be diverse enough for the task. A dog-only dataset cannot teach many animal categories.

Q.34 **An AI drawing app creates a fake image of a real person. What should a responsible user do before sharing it?**

Achievers Section

A. Share it as real news.
B. Ask permission and clearly mark it as AI-generated if used.
C. Use it to trick others.
D. Hide how it was made.

Answer: B

Explanation: Deepfake-like content can mislead people. Consent, honesty, and labeling are responsible practices.

Q.35 **A school AI quiz system stores student names, marks, and login details. Which rule is most important?**

Achievers Section

A. Share all details publicly.
B. Use weak passwords for convenience.
C. Keep data secure and collect only what is needed.
D. Keep data forever without reason.

Answer: C

Explanation: Responsible AI systems protect privacy, use security, and collect only necessary data.

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Answer Key

Question	Answer	Question	Answer	Question	Answer
1	B	13	A	25	A
2	C	14	B	26	B
3	A	15	C	27	C
4	D	16	D	28	D
5	B	17	A	29	A
6	A	18	B	30	B
7	C	19	C	31	C
8	D	20	D	32	A
9	A	21	A	33	D
10	B	22	B	34	B
11	C	23	C	35	C
12	D	24	D		

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Space for Rough Work