



SCO INTERNATIONAL OLYMPIAD

CLASS 1 SAMPLE PAPER

ARTIFICIAL INTELLIGENCE OLYMPIAD

A comprehensive sample paper for schools, teachers, parents, and students

Designed in the official SCO format with 35 solved question blocks and embedded answer keys and explanations.

AI Basics	Smart Apps	Voice Assistants	Robots	Pattern Recognition
Daily Use	Smart Systems	Problem Solving	Case Studies	Achievers

Questions	Level	Format	Use
35	Class 1	Solved MCQ blocks	Website / School use

Guidelines for the Candidate

Sample-paper edition with answers embedded in each block

Paper format

- Total questions: 35
- Question type: multiple choice
- One correct option for each question
- Answers and explanations are kept inside every question block

Editing checks applied

- source title mismatch corrected and standardized to IAIO sample paper
- source footer/class mismatch corrected to Class 1 format
- section structure cleaned for readability
- cover page rebuilt as editable Word elements, not a full-page image

Section 1 — Basic AI Concepts**Question 1****What Is Artificial Intelligence?**

What is Artificial Intelligence (AI)?

- | | |
|-------------------------------------|--|
| 1. A robot that only plays games | 2. A computer program that can think and learn |
| 3. A machine that makes loud noises | 4. A toy that runs on batteries |

Answer Key: Option 2

Explanation: Artificial Intelligence refers to computer programs or machines that can think, learn, and make decisions like humans.

Question 2**Voice Assistants**

Which of these is an example of a voice assistant?

- | | |
|-----------|------------|
| 1. Alexa | 2. Bicycle |
| 3. Fridge | 4. Clock |

Answer Key: Option 1

Explanation: Alexa is an AI voice assistant that can listen to your commands and respond.

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Question 3**Robots in Daily Life**

Robots are used in homes to do which task?

- | | |
|------------------|----------------------------|
| 1. Play football | 2. Wash clothes |
| 3. Clean floors | 4. Cook food automatically |

Answer Key: Option 3

Explanation: Robots like vacuum cleaners (e.g., Roomba) use AI to clean floors automatically.

Question 4**AI and Simple Apps**

Which of these apps uses AI to recognize faces in photos?

- | | |
|----------------|----------------|
| 1. Calculator | 2. Camera App |
| 3. Weather App | 4. Alarm Clock |

Answer Key: Option 2

Explanation: AI is used in camera apps to recognize faces, smile detection, and even beautification.

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Question 5**Pattern Recognition**

In a pattern of shapes: Circle, Square, Circle, Square, what comes next?

- | | |
|-------------|--------------|
| 1. Square | 2. Circle |
| 3. Triangle | 4. Rectangle |

Answer Key: Option 2

Explanation: The pattern alternates between Circle and Square, so the next is Circle.

Question 6**Object Recognition**

Which AI system can recognize objects in pictures?

- | | |
|------------------------|-------------------|
| 1. A dictionary | 2. A shopping app |
| 3. A photo-editing app | 4. Google Lens |

Answer Key: Option 4

Explanation: Google Lens uses AI to recognize objects in photos and provide information about them.

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Question 7**Recognizing Colors**

AI recognizes colors by using what?

- | | |
|--------------------------|-------------------------------|
| 1. Numbers and letters | 2. Colors in a crayon box |
| 3. Shapes in the picture | 4. A computer code for colors |

Answer Key: Option 4

Explanation: AI uses codes like RGB (Red, Green, Blue) to recognize and work with colors.

Question 8**Challenging Voice Assistant Question**

If you ask a voice assistant, "What's the weather?", how does it know the answer?

- | | |
|---|--------------------------------|
| 1. It guesses the weather | 2. It looks outside the window |
| 3. It checks the internet for weather updates | 4. It asks another robot |

Answer Key: Option 3

Explanation: AI in voice assistants retrieves weather data from online sources.

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Question 9**AI and Robots**

Which robot can help a doctor during surgery?

- | | |
|---------------------|-----------------------------------|
| 1. A toy robot | 2. A surgical robot like Da Vinci |
| 3. A cleaning robot | 4. A dancing robot |

Answer Key: Option 2

Explanation: Robots like Da Vinci assist doctors in surgeries with high precision, using AI.

Question 10**AI in Games**

Which of these games uses AI to play with you?

- | | |
|------------------|------------------|
| 1. Tic-Tac-Toe | 2. Hide and Seek |
| 3. Lego building | 4. Running races |

Answer Key: Option 1

Explanation: AI can be programmed to play Tic-Tac-Toe by predicting and responding to your moves.

Section 2 — AI in Daily Use**Question 11****Smart Home Lights**

In a smart home, the lights turn on automatically when it gets dark. How does the AI know it's dark?

- | | |
|---|---------------------------------------|
| 1. It uses a clock to check the time | 2. It listens for sounds in the house |
| 3. It uses sensors to detect low light levels | 4. It asks you if it's dark |

Answer Key: Option 3

Explanation: AI in smart homes uses light sensors to detect when it gets dark and turns on the lights automatically.

Question 12**Self-Driving Car Safety**

A self-driving car stops when a pedestrian is crossing the street. How does the AI in the car know there is a pedestrian?

- | | |
|--------------------------------------|---|
| 1. It guesses there might be someone | 2. It uses cameras and sensors to detect the person |
| 3. It listens for footsteps | 4. It asks the pedestrian to move |

Answer Key: Option 2

Explanation: AI in self-driving cars uses cameras and sensors to recognize objects like pedestrians and stop the car for safety.

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Question 13**Virtual Assistant Maths**

You ask a virtual assistant, "What is 12 multiplied by 4?" The AI gives you the answer in seconds. How does it solve this?

- | | |
|--------------------------------------|---|
| 1. It asks a human for help | 2. It uses a calculator built into its system |
| 3. It searches for the answer online | 4. It guesses the answer |

Answer Key: Option 2

Explanation: Virtual assistants have built-in calculation programs to solve math problems instantly.

Question 14**Shopping App Suggestions**

You search for a red toy car in a shopping app. The app starts showing other red toys. How does AI know what to show you?

- | | |
|---|---|
| 1. It remembers what you searched and looks for similar items | 2. It asks someone to pick toys for you |
| 3. It shows random toys | 4. It looks in your toy box |

Answer Key: Option 1

Explanation: AI in shopping apps uses your search history to recommend similar items.

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Question 15**Voice Recognition on a Phone**

You say "Hello" to your phone, and it unlocks. How does the AI know it's your voice?

- | | |
|--|---|
| 1. It can hear and recognize your unique voice | 2. It guesses based on who is holding the phone |
| 3. It asks you to type a password first | 4. It unlocks for anyone who says "Hello" |

Answer Key: Option 1

Explanation: AI uses voice recognition technology to identify your voice based on its unique features.

Section 3 — Smart Systems & AI Situations**Question 16****Smart Speaker Memory**

A smart speaker plays Anna's favorite song when she asks for it. Ben wonders how it knows which song to play. What is the best explanation?

- | | |
|---|-------------------------------|
| 1. It guesses randomly | 2. It reads your mind |
| 3. It remembers the song you asked for before | 4. It plays any song it likes |

Answer Key: Option 3

Explanation: Voice assistants use memory and AI to recall your previous requests and play your favorite songs.

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Question 17**Robot Vacuum Navigation**

Tom's robot vacuum cleans the house even when he is not there. How does it know where to clean?

- | | |
|---|----------------------------|
| 1. It uses sensors to detect dirt and obstacles | 2. It follows the sunlight |
| 3. It cleans only one spot repeatedly | 4. It guesses where to go |

Answer Key: Option 1

Explanation: Robot vacuums use AI with sensors to detect dirt, avoid obstacles, and clean efficiently.

Question 18**Weather App Prediction**

John uses a weather app that says it will rain tomorrow. How does the app know that?

- | | |
|--|--|
| 1. It uses satellites and weather patterns | 2. It looks at the clouds through a camera |
| 3. It asks someone to check the weather | 4. It makes random predictions |

Answer Key: Option 1

Explanation: AI in weather apps uses data from satellites and weather patterns to predict the weather.

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Question 19**AI in Video Games**

Mia loses a video game to a computer-controlled player. How is the computer able to play so well?

- | | |
|--|------------------------------|
| 1. It uses AI to learn and make smart moves | 2. It cheats to win the game |
| 3. It watches you play and copies your moves | 4. It guesses how to play |

Answer Key: Option 1

Explanation: AI in games is designed to analyze the player's actions and create strategies to challenge them.

Question 20**Delivery Time Tracking**

Lucy orders a toy online, and the app tells her it will arrive tomorrow. How does the app know that?

- | | |
|---|---|
| 1. It tracks the delivery process and calculates the time | 2. It knows exactly where the toy is hidden |
| 3. It drives the delivery truck itself | 4. It guesses when the toy might come |

Answer Key: Option 1

Explanation: AI in delivery services uses tracking data to estimate when the item will arrive.

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Question 21**Smart Traffic Lights**

Sarah sees traffic lights changing automatically when cars stop or go. How do smart traffic lights know when to change?

- | | |
|---|---|
| 1. AI detects the number of cars and changes the lights | 2. The wind blows the lights to change them |
| 3. It randomly changes without any reason | 4. A person on a camera decides when to change them |

Answer Key: Option 1

Explanation: AI in traffic lights uses sensors or cameras to detect cars and adjust the signals accordingly.

Question 22**Online Shopping Suggestions**

Emma shops online and notices the app shows items she might like. How does it know what to recommend?

- | | |
|--|--|
| 1. It uses AI to suggest items based on what you've looked at before | 2. It guesses randomly what you might like |
| 3. It asks other people what you want | 4. It sends you everything in the store |

Answer Key: Option 1

Explanation: AI analyzes your browsing history and preferences to recommend items you might like.

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Question 23**Smart Thermostat**

Jake's smart thermostat changes the temperature when it gets too hot or cold. How does it know what to do?

- | | |
|---|--|
| 1. It uses sensors and AI to detect temperature changes | 2. It changes the temperature randomly |
| 3. It asks someone in the house to adjust it | 4. It doesn't actually change anything |

Answer Key: Option 1

Explanation: Smart thermostats use AI to analyze temperature data and automatically adjust settings for comfort.

Question 24**Customer Service Bot**

Olivia chats with a customer service bot online, and it answers her questions. How does it know what to say?

- | | |
|--|---|
| 1. It uses AI to understand your questions and respond | 2. It doesn't actually answer and just pretends |
| 3. It reads your mind to figure out what to say | 4. It guesses the answers randomly |

Answer Key: Option 1

Explanation: Chatbots use AI to process language, understand questions, and provide helpful responses.

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Question 25**Smart Door Camera**

Lily's smart camera alerts the family when someone is at the door. How does it know if it is a person or an animal?

- | | |
|---|---|
| 1. It uses AI to recognize shapes and movements | 2. It guesses if it's a person or an animal |
| 3. It only works when someone tells it what to look for | 4. It doesn't actually know anything |

Answer Key: Option 1

Explanation: Smart cameras use AI to analyze shapes, patterns, and movements to identify people, animals, or objects.

Question 26**Buddy the Voice Assistant**

Sam and Lily ask a voice assistant named Buddy to play music and tell the weather. What is Buddy using to answer Lily's question?

- | | |
|--------------------------|----------------------------|
| 1. A weather report book | 2. Artificial Intelligence |
| 3. A thermometer | 4. A magic spell |

Answer Key: Option 2

Explanation: Buddy is using AI to fetch weather data from the internet and respond to Lily.

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Question 27**Max the Kitchen Robot**

A kitchen robot named Max sees a red vegetable and knows it is a tomato. How does Max know the tomato is red?

- | | |
|---------------------------------------|------------------------|
| 1. It has hands to feel the vegetable | 2. It uses its memory |
| 3. It uses pattern recognition and AI | 4. It guesses randomly |

Answer Key: Option 3

Explanation: Max uses its AI to identify colors and shapes to recognize the vegetable as a tomato.

Question 28**Smart Light at Home**

A smart light turns on when Mia enters the room and turns off when she leaves. What helps the light work this way?

- | | |
|--|--------------------------------|
| 1. It has eyes to see Mia | 2. It uses a camera |
| 3. Artificial Intelligence and sensors | 4. Mia presses a hidden button |

Answer Key: Option 3

Explanation: The smart light uses AI combined with motion sensors to detect Mia's movement.

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Question 29**Pattern Matching Game**

Arjun plays a tablet game where he must match shapes to score points. How does the game know that his matches are correct?

- | | |
|---|---|
| 1. The game uses AI to check the patterns | 2. The game asks a teacher to check the answers |
| 3. Arjun tells the game it's correct | 4. The shapes speak to the game |

Answer Key: Option 1

Explanation: The game is programmed with AI to recognize and validate patterns when Arjun matches the shapes.

Question 30**Translation App**

Emma uses an app that translates "Hello" into "Hola." How does the app know how to translate the word?

- | | |
|-------------------------------------|---|
| 1. The app reads a translation book | 2. The app uses Artificial Intelligence |
| 3. The app asks a teacher | 4. The app copies from another phone |

Answer Key: Option 2

Explanation: The translation app uses AI to understand languages and provide the correct translations instantly.

Section 4 — Case Studies & Problem Solving

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Question 31

Voice Assistant Mistake

Riya's home voice assistant usually plays a happy song when she asks for her favorite music, but one day it plays a sad song. Why might it have made a mistake?

- | | |
|--|---|
| 1. Riya forgot to say "please." | 2. The voice assistant misheard Riya's request. |
| 3. The assistant was feeling sad that day. | 4. Riya's favorite music changed without her knowing. |

Answer Key: Option 2

Explanation: Voice assistants rely on recognizing words correctly. If there is noise or unclear speech, they might make mistakes.

Question 32

Delivery Robot Wrong Turn

A robot delivering books at school keeps taking the wrong turn near one classroom. How can the robot learn to stop making that mistake?

- | | |
|--|--|
| 1. The robot needs to be told to avoid that turn using instructions. | 2. The robot needs to take a nap. |
| 3. The students should push the robot in the right direction. | 4. The robot should use its arms to feel the correct path. |

Answer Key: Option 1

Explanation: Robots learn from instructions or data. Giving the robot the correct map or marking the path can help it avoid mistakes.

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Question 33

Sorting a Striped Toy

A toy-shop robot sorts toys by color but sees a toy with both red and blue stripes. What should the robot do?

- | | |
|---|---|
| 1. Put the toy in both the red and blue bins. | 2. Leave the toy on the ground. |
| 3. Ask someone for help deciding. | 4. Put the toy in the red bin because red comes first in the rainbow. |

Answer Key: Option 3

Explanation: Robots sometimes cannot decide in complex cases and need human guidance to learn or improve their sorting ability.

Question 34

Vegan Recipe Assistant

Ravi uses a smart cooking assistant, but his family is vegan and the assistant suggests eggs. What can Ravi do to improve the assistant's future instructions?

- | | |
|---|--|
| 1. Turn off the assistant. | 2. Add the eggs anyway. |
| 3. Teach the assistant about vegan recipes. | 4. Ask his family to eat eggs this one time. |

Answer Key: Option 3

Explanation: AI assistants can be taught or programmed to adapt to user preferences, such as vegan recipes.

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Question 35**Shape Game Error**

A pattern-recognition game says Aarav's answer is wrong even when he clicks on a square. What could be wrong with the game?

- | | |
|---|--|
| 1. The screen is broken. | 2. The game's AI might not be recognizing squares correctly. |
| 3. Aarav is clicking on the wrong shapes. | 4. Squares are no longer allowed in the game. |

Answer Key: Option 2

Explanation: Sometimes, AI programs can have bugs or errors. The AI in the game might need fixing to recognize shapes correctly.