

6.3 Artificial intelligence

Name: _____ Class: _____ Date: _____

Total: 7 marks

Objective

Build the skills to answer exam questions on **artificial intelligence** 人工智能—what AI is, its characteristics, examples, and **narrow/general/strong AI** 弱/通用/强人工智能.

You must be able to:

- define AI and give its characteristics
- give examples of AI (expert systems, NLP, self-driving cars)
- distinguish narrow, general and strong AI

1 Worked examples

■ Levels of AI

increasing
ability
↑

general and strong
AI do not exist yet

Strong AI

thinks and is self-aware,
like a human

General AI

any task a
human can do

Narrow AI

one task or a few
(e.g. chess, chatbots)

← all AI today

Narrow AI: one task (all AI today). General AI: any human task. Strong AI: self-aware (does not exist yet)

- **AI:** the simulation of human intelligence by computers.
- **characteristics:** collect data + rules; reason; draw conclusions; learn; adapt.

2 Practice

2.1 Define artificial intelligence. [1]

2.2 Give one example of an AI application. [1]

3 Exam-style questions

3.1 A chess-playing program that can do only that one task is an example of: [1]

- **A** narrow AI
 - **B** general AI
 - **C** strong AI
 - **D** an automated system
-

3.2 AI systems have several characteristics.

(a) State two characteristics of an AI system. [2]

(b) State the difference between narrow AI and general AI. [2]

4 Go further

You are now ready for the real exam questions on this subtopic. Open the **6.3 Artificial intelligence** past-paper sheet in the Library, or try these in **Practice mode**:

- 0478/12 N25 —Q7 (artificial intelligence)
- 0478/13 N25 —Q6 (AI types)

Solutions

2.1 the simulation of human intelligence by computer systems.

2.2 any of: expert system; natural language processing; self-driving car.

3.1 A. A single-task program is narrow AI.

3.2 (a) any two of: collect data and rules; reason; draw conclusions; learn; adapt.

(b) narrow AI can do only one (or a few) tasks; general AI could do any task a human can do.