

SERIES NUM. 01: STANDARD ANSWER

Exercise 01

1. Define in your own words:

- (a) Intelligence :
 - Ability to resolve complex problems efficiently and within a limited time.
 - The ability to perceive, understand, learn, innovate and make decisions regarding a given problem.
- (b) Artificial intelligence
 - The discipline that studies how computers can perform tasks that humans seem better.
 - Equipping the machine with means of perception, understanding and learning so that it can carry out tasks that were exclusive to humans.
- (c) Agent: an intelligent, autonomous, active, interactive and collaborative program known in the field of AI.

2. AI is used in :

- (a) Finance
- (b) Robotics
- (c) Games
- (d) Medicine
- (e) Internet

Exercise 02

An AI approach is called:

- (a) Wetware: the biological equivalent of hardware and software in computing, ie, the nervous system. (No)
- (b) Formula (No)
- (c) **Intelligent agent (Yes)**

Exercise 03

Study the AI literature to determine if current computers can do the following:

- (a) Play ping pong. (Yes)
- (b) Driving within Cairo center. (Yes)
- (c) Buy a week's provisions at the supermarket. (No)
- (d) Buy a week's provisions on the web. (Yes)
- (e) Discover and demonstrate new mathematical theorems. (Yes)
- (f) Write an intentionally funny story. (No)
- (g) Provide relevant advice in a specialized legal area. (Yes)
- (h) Translate in real time from spoken English to Swedish. (Yes)
- (i) Perform a complex surgical operation. (Yes)

For tasks that are currently impossible, try to determine the difficulties they present and predict when they can be overcome (if it is possible). (a collective discussion)

Exercise 04

Are reflex actions (like removing your hand from a hot stove) rational? Are these intelligent actions?

- Yes reflex actions are rational
- But, they are not intelligent, because they are not based on thinking or inference.

Exercise 05

“Computers cannot be intelligent; they can only do what their programmers tell them to do” is the last proposition true and does it logically entail the first?

- The 2nd part of the sentence is not always true ==> because this excludes the role of AI which makes the machine more or less intelligent.

Exercise 06

“Animals cannot be intelligent; they can only do what their genes command them to do” is the last proposition true and does it logically lead to the first?

The 2nd part of the sentence is not always true, because:

- The animal can make intelligent decisions and actions that are not controlled by its genes (cases of risk, cases of hunger, etc.).
- If we accept this for animals, we must accept it for humans who also have genes.

Exercise 07

“Animals, humans and computers cannot be intelligent; they can only do what the laws of physics command their atoms to do” is the last proposition true and does it logically entail the first?

The 2nd part of the sentence is not always true, because it means:

- The exclusion of intelligence (natural intelligence for humans and animals, artificial intelligence for machines)
- Exclusion of liability (for humans)
- Exclusion of freedom to make decisions for humans (related to responsibility)
- Exclusion of sanctions and compensation.

Exercise 07: Test your intelligence (J. Searle method)

Given the following English-Chinese dictionary:

Number	Question	Answer
01	What are your hobbies?	Sport, Internet, reading, listening music
02	Who is your preferred teacher?	
03	你多大了？	20 年。
04	你快乐吗？	不太好。
05	你在学习什么？	计算机科学听我说
06	同比感谢非常	
07	再见	

Answer the following questions:

1. Hello, what's your first name? **Ali**
2. What's your last name? **hammani**
3. Where are you working? ***At the university of M'sila***
4. 你多大了？20 年。
(How old are you ?20 years)
5. Do you speak English ?Yes
6. 你在学习什么？计算机科学听我说 (05)
7. Are you a good student ?***Not well.***
8. 你快乐吗？不太好。(04)
9. 同比感谢非常 (06)
(Thank you very much/you are welcome)
10. 再见 (07)
(Good bye)

Prepared and supervised by:

Dr. Said KADRI