

CHARACTERISTICS OF LIVING ORGANISMS

Following are the seven characteristics of living organisms:

1. **Movement:** It is an action by an organism or part of an organism causing a change of position or place.
2. **Respiration:** The chemical reactions in the cells that break down nutrient molecules and release energy for metabolism are called as respiration
3. **Sensitivity:** It is the ability to detect and respond to changes in the internal or external environment.
4. **Growth:** It is the permanent increase in size and dry mass
5. **Reproduction:** Processes that makes more of the same kind of organism.
6. **Excretion:** It is the removal of the waste products of metabolism and substances in excess of requirements.
7. **Nutrition:** It is the taking in of materials for energy, growth and development.

Note: The correct answer option has been mentioned at the extreme end of the question code as shown in the example below

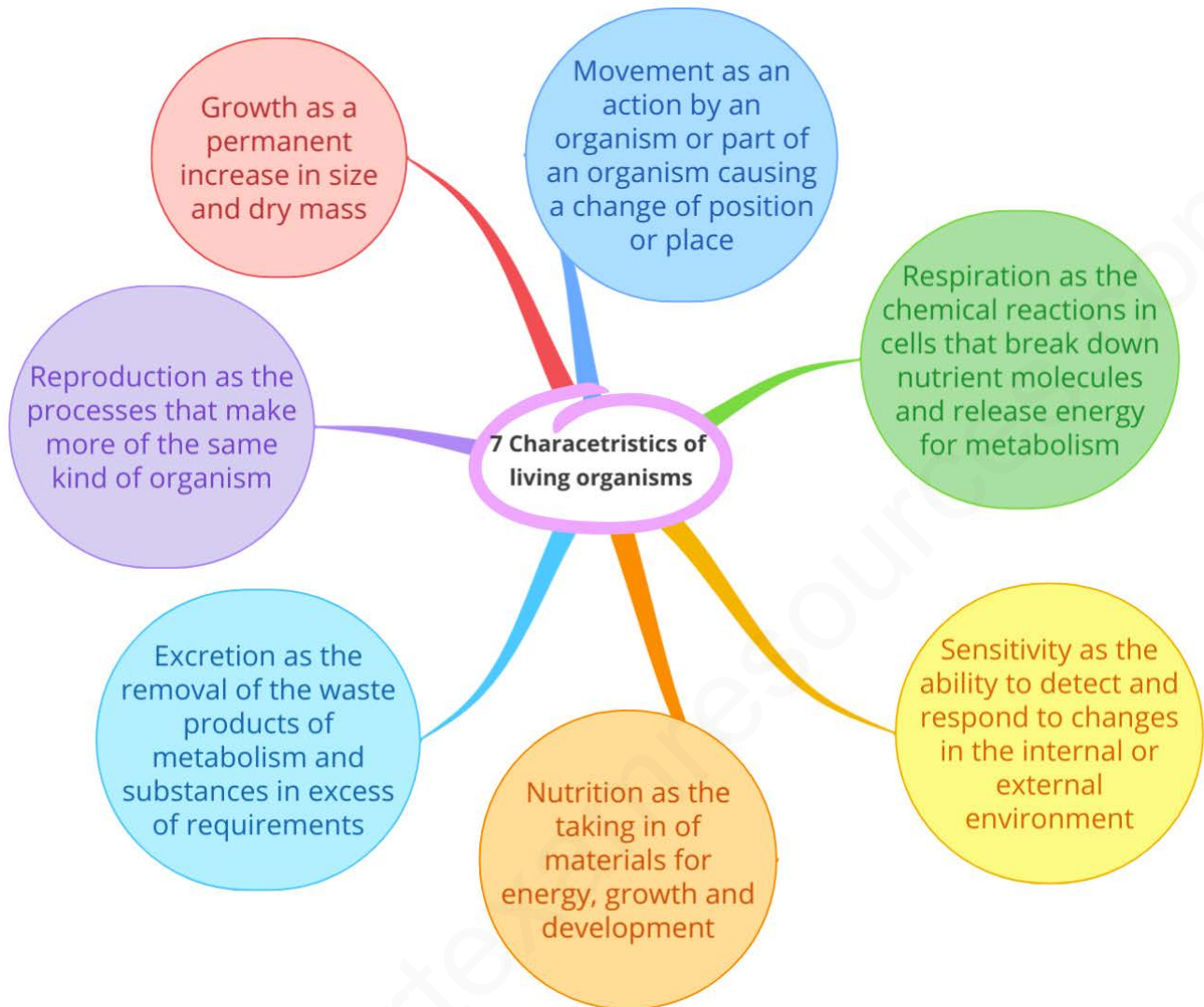
O/N/10/12/Q7-C

Links to practise questions for this topic:

Note:

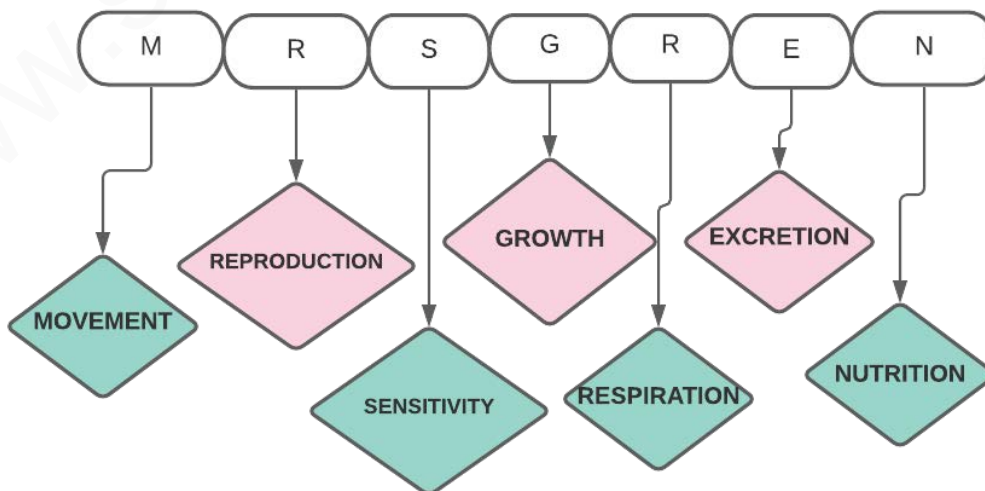
1. The above are the exact wordings of definitions for the curriculum for 2023 to 2025 examinations given in the syllabus by CAIE.
2. The Now there are no separate definitions for the core and the extended curriculum. Students are advised to strictly learn and write the definitions as per this material in order to avoid losing marks in their respective exams.

MIND MAP FOR THE CHARACTERISTICS OF LIVING ORGANISMS



MNEMONIC FOR THE SEVEN CHARACTERISTICS OF LIVING ORGANISMS:

CHARACTERISTICS OF LIVING ORGANISMS



Skin, kidneys and lungs are the three major organs of excretion in humans:

- **Sweat glands** in the skin produce sweat. This contains water, urea and salt. Excreting sweat helps keep the body cool in hot conditions.
- **The kidneys** remove excess water, salts and urea to prevent a toxic build-up of these substances in the body.
- **The lungs** remove excess carbon dioxide (and some water) when breathing out.

Some key terms:

- ☑ **Ingestion:** It means to take in food from the mouth.
- ☑ **Egestion:** Egestion is the discharge or expulsion of undigested material (food) from a cell in case of unicellular organisms, and from the digestive tract via the anus in case of multicellular organisms

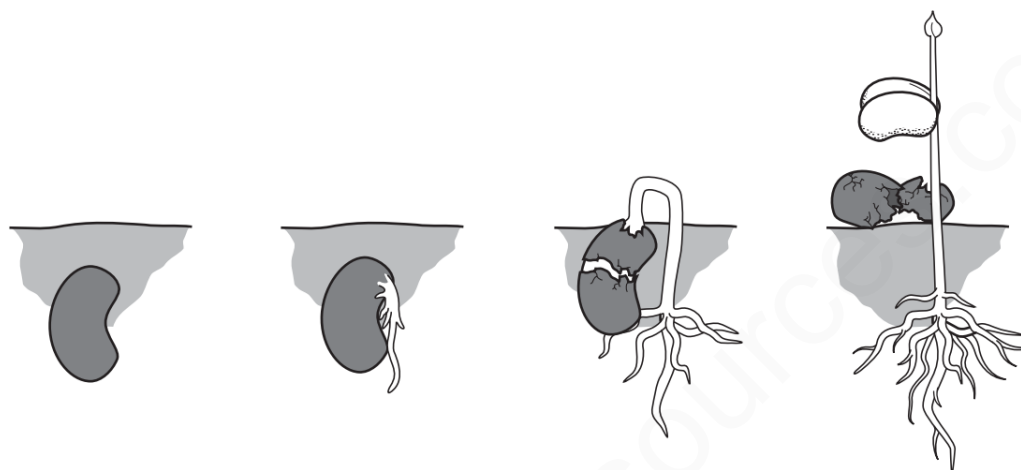
For more topic wise practise questions for this lesson, click the following links

SOME IGCSE PAST PAPER QUESTIONS:

MCQ:

O/N/14/12-Q1-B

- 1 The diagram shows how a seed changes after it is planted in well-watered soil.



Which characteristics of living things are demonstrated by this sequence?

- A growth and reproduction
- B growth and sensitivity
- C nutrition and reproduction
- D nutrition and sensitivity

Answer B: The answer is B. This is because the seed is seen to grow by developing roots and shoots. The diagram also shows the roots growing towards gravity and the shoot towards the sunlight. Hence the image shows growth as well as sensitivity.

O/N/15/12/-Q1-D

- 1 Some lizards detach their tails when threatened by a predator.

Which characteristic is shown?

- A excretion
- B growth
- C reproduction
- D sensitivity

Give your justification for Option D being correct here

6 Which characteristic of living organisms is described by the following definition?

'The ability to detect changes in the environment and make responses'.

- A excretion
- B movement
- C respiration
- D sensitivity

Give your justification for Option D being correct here

7 Which characteristic of living organisms can involve ingestion, absorption and assimilation?

- A excretion
- B growth
- C nutrition
- D respiration

Give your justification for Option C being correct here

For more topic wise practise questions for this lesson, click the following links

EXTENDED THEORY:

O/N/11-P32-Q2(a)

2 (a) Movement is a characteristic of living organisms.

Define the term *movement*.

.....

..... [1]

MARK SCHEME:

2	(a)	whole / part of, organism changes in position / changes in place ;	[1]	ignore locomotion A (moves) from place to place / one place to another
---	-----	---	-----	---

This is an example of how the answer needs to be written to the above question:

IDEAL ANSWER AS PER THE NEW SYLLABUS PRESCRIBED FOR 2023 TO 2025 EXAMS

Movement: It is an action by an organism or part of an organism causing a change of position or place.

For more topic wise practise questions for this lesson, click the following links

NOTE:

While learning definitions, strictly learn the definitions given as per your exam syllabus..