

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:

- (1) On your own (2) With your notes (3) With another student



Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

True or False: Identify the following statements as true or false. If FALSE, rewrite the UNDERLINED WORD with the correction (1 mark each)

1. T

Water is stored in the geosphere in the form of ground water.
lithosphere =

2. T

Non-point source pollution is difficult to track and regulate.

3. F

Global warming is a result of excess water vapour in the atmosphere.

greenhouse gases (CO₂)

4. F

In a food chain, the first organisms always starts with a consumer.

producer

5. F

Nutrients are distributed around Earth due to the winds.

Ocean currents

Multiple Choice: Choose the BEST answer (1 mark each)

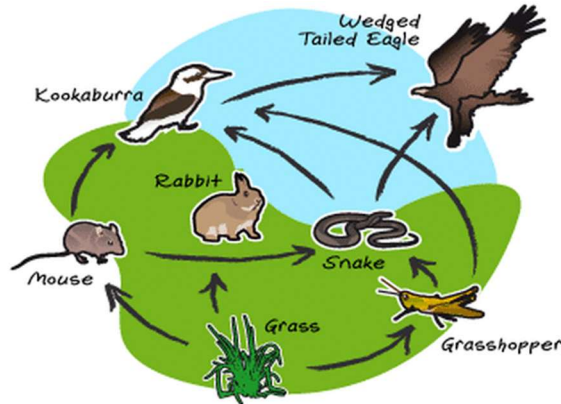
B 6. Which of the following is an abiotic part of an ecosystem?

- a. Decomposer
- b. Sun

- c. Spider
- d. Cacti

- B 7. Which of the following is responsible for the **energy flow** from the first trophic level to the fourth trophic level in a pyramid of energy?
- a. Decomposition
 - b. Predation
 - c. Photosynthesis
 - d. Limiting Factors
- C 8. The process that is almost the reverse of photosynthesis is _____?
- a. Transpiration
 - b. Carrying Capacity
 - c. Respiration
 - d. Precipitation
- A 9. Plants get most of their supply of carbon from ...
- a. Air - *CO₂ from the air during photosynthesis*
 - b. Soil
 - c. Water
 - d. None of the above
- B 10. Bacteria and fungi etc. break down organic matter in a process known as _____?
- a. Photosynthesis
 - b. Decomposition
 - c. Algal bloom
 - d. Cellular Respiration
- C 11. All food chains start with a ...
- a. Decomposer
 - b. Primary consumer
 - c. Producer
 - d. Apex consumer
- D 12. A consumer that only eats other consumers is called a ...
- a. Herbivore
 - b. Omnivore
 - c. Decomposer
 - d. Carnivore
- C 13. The correct term to describe the non-living components of an environment is ...
- a. Dead
 - b. Biotic
 - c. Abiotic
 - d. Zombie
- D 14. Which of the following spheres is **not** part of the phosphorus cycle?
- a. Hydrosphere
 - b. Biosphere
 - c. Lithosphere
 - d. Atmosphere
- D 15. Which wind pattern is responsible for the prevailing winds across North America?
- a. Trade Winds
 - b. Great Ocean Conveyor Belt
 - c. Polar Easterlies
 - d. Westerlies
- D 16. The starting process in the water cycle is always ...
- a. Evaporation
 - b. Precipitation
 - c. Condensation
 - d. Any of the options
- A 17. Which of the following is considered a long-term store of carbon?
- a. Fossil fuels
 - b. Plants
 - c. Animals
 - d. Decomposers

Use the following food web for questions #18 - 20:



- D 18. Which of the following could be considered the primary consumer?
- a. Snake
b. Wedged tailed eagle
c. Kookaburra
d. Grasshopper
- A 19. Which organism is on the second trophic level?
- a. Mouse
b. Kookaburra
c. Wedged tailed eagle
d. Grass
- A 20. If grass is able to create 100% of its own energy, how much energy would the mouse gain after consuming the grass?
- a. 10%
b. 25%
c. 90%
d. 100%
- D 21. Which of the following is a biotic part of the ecosystem?
- a. Soil
b. pH
c. Water
d. Decomposer
- A 22. An algal bloom is caused by an excess of nitrogen or phosphorus in which of the following?
- a. Hydrosphere
b. Biosphere
c. Atmosphere
d. Lithosphere
- B 23. An ecosystem is able to support a maximum of 100 organisms. What is this idea describing?
- a. Limiting factors
b. Carrying capacity
c. Small population
d. Lack of resources
- D 24. Which of the following describes **decomposers**?

I.	Recycles dead organisms	✓
II.	Causes biodegradation	✓
III.	Makes nutrients available to producers	✓

- a. I and II only
b. I and III only
c. II and III only
d. I, II, and III

A 25. Which trophic level contains the **most overall energy**?

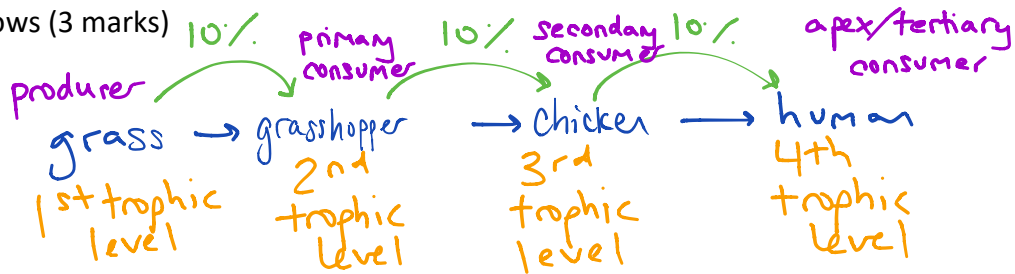
- a. First
b. Second
c. Third
d. Fourth

Matching: Match the term on the left with the descriptor on the right. (5 marks)

Term	Descriptor
<u>C</u> 26. Cellular Respiration	A. Organisms that make carbohydrates during photosynthesis
<u>A</u> 27. Producers	B. Substances that are required for energy or growth in organisms
<u>E</u> 28. Sedimentation	C. Process that releases carbon dioxide back into the atmosphere
<u>B</u> 29. Nutrients	D. Steps in a food chain
<u>D</u> 30. Trophic Level	E. Process in which soil and decaying organisms accumulate in layers

Short Answers

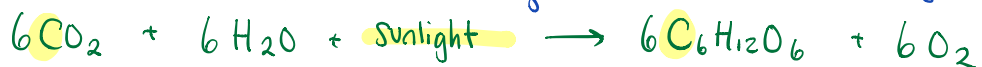
1. Draw and label each level of a **food chain** that includes YOU. It must contain at least 3 trophic levels. Include arrows (3 marks)



2. Explain why the **sun** is essential to... (2 marks)

a. food chains The sun is the energy source that producers need to create their own energy. This energy is then passed on to consumers and up the food chain as one organism eats another.

b. the carbon cycle The sun is the driving force for photosynthesis to occur in plants (plants converting CO₂ in the air into glucose)



3. Why are decomposers not drawn as part of food pyramids? (1 mark) (glucose)

Decomposers exist on all trophic levels in the food pyramid.

4. List each of **earth's 4 spheres**, along with **2 examples** of things from each (4 marks)

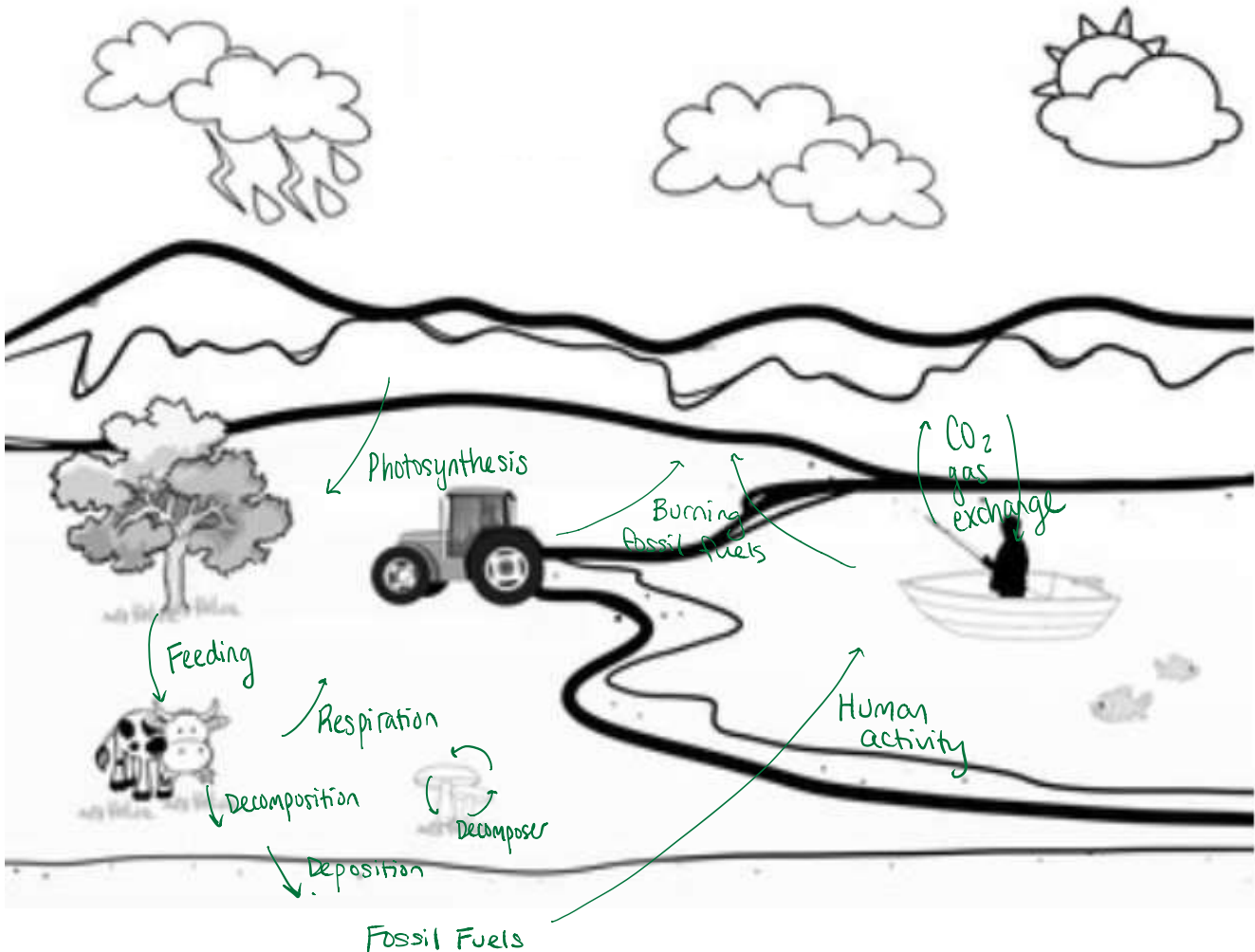
Lithosphere - rock, granite, earth's crust

Hydrosphere - water, ice, snow, water vapour

Atmosphere - air, clouds

Biosphere - plants, animals, insects

5. In the following diagram, show how the **carbon** cycle interacts in the following ecosystem. Be sure to **draw and label** arrows to show the flow of the carbon cycle. (3 marks)



6. What are the effects on the Earth due to excess burning of fossil fuels? (2 marks)

Excess fossil fuels in the atmosphere have led to an increase in the temperature on Earth (global warming).

This in return has caused :

- ↳ Melting glaciers
- ↳ Rise in sea levels
- ↳ Flooding
- ↳ Warmer & more acidic sea water
 - ↳ aquatic life (coral reefs) being harmed
- ↳ Extreme weather events