

Science Department

Mock Exam

Term 3 - 2023/2024

Grade: 5

Copy N (1)

Levels (Bloom's Taxonomy)	Difficulty level	Symbol	Percentage
Remember	Easy- Medium	E,M	20
Understand	Easy- Medium	E,M	20
Apply	Easy- Medium-Difficult	E, M, D	20
Analyze	Easy- Medium-Difficult	E, M, D	20
Evaluate	Difficult	D	10
Create	Difficult	D	10

Part (1) Multiple Choice

Q1.) ____ is the *evaporation* of water from a plant's leaves.



- a. transpiration
- b. storage
- c. water absorption
- d. nutrient evaporation

Q2. Select the factor that is NOT *abiotic*.

- a. rocks
- b. air
- c. animals
- d. water

Q3. Explain the role of *decomposers* in an ecosystem.



- a. Decomposers are organisms that consume only plant material.
- b. Decomposers are organisms that break down plant and animal matter.
- c. Decomposers are organisms that are introduced to a new ecosystem and cause harm to it.
- d. Decomposers are organisms that are able to produce their own food.

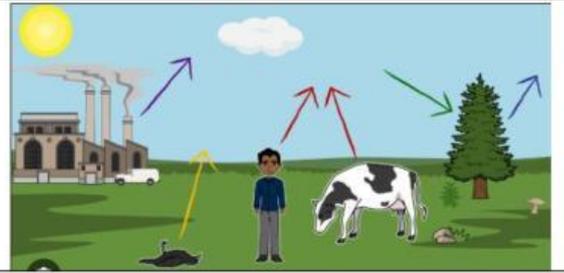
Q4. Read the sentence below. Then, infer which of *Earth's systems* are interacting:

The heavy floods eroded the riverbank.



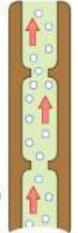
- a. hydrosphere and atmosphere
- b. atmosphere and geosphere
- c. geosphere and biosphere
- d. hydrosphere and geosphere

Q5. All living things use energy and release gas as a *waste product*. Identify the *cycle* that explains the *circulation* of these gases?



- a. Water cycle
- b. Oxygen-carbon cycle
- c. Nitrogen cycle
- d. Hydrogen cycle

Q6. Name the *tissue* responsible for the *transport* of water and nutrients from the roots to all parts of the plant.



- a. phloem
- b. stomata
- c. xylem
- d. guard cells

Q7. Predict what would happen to the *population* of rabbits if the fox *population* in a forest ecosystem increased?



- a. It would decrease.
- b. It would stay the same.
- c. It would increase.
- d. Only the fox population will be affected.

Q8. Clarify how *decomposers* help humans manage the amount of *food waste* they produce?



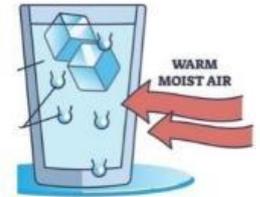
- a. Decomposers help food to ripen.
- b. Decomposers help to break down food waste, like in compost heaps.
- c. Decomposers cause food to get moldy.
- d. Decomposers absorb the water in food waste.

Q9. Suggest what happens when water *evaporates* from a puddle on the street.



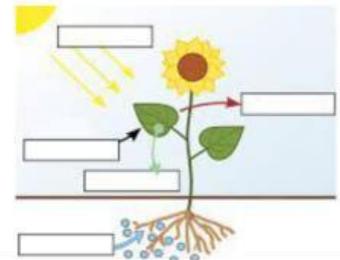
- a. It is absorbed by the biosphere.
- b. It flows into a nearby stream or river.
- c. It sinks into the geosphere.
- d. It rises into the atmosphere.

Q10. Provide the correct definition for the part of the *water cycle* in which *water vapor gas* changes to a *liquid*.



- a. transpiration
- b. condensation
- c. runoff
- d. evaporation

Q11. Choose the *material* used by plants to make food that can be found in the *air*?



- a. carbon dioxide
- b. oxygen
- c. nitrogen
- d. nutrients

Q12. Describe the role of *predators* in an *ecosystem*.



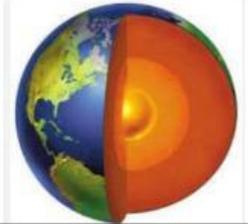
- a. Predators are herbivores.
- b. They increase the size of prey populations.
- c. They help control the size of prey populations.
- d. Predators do not have a role in an ecosystem.

Q13. How would you differentiate between *fungi* and plants?



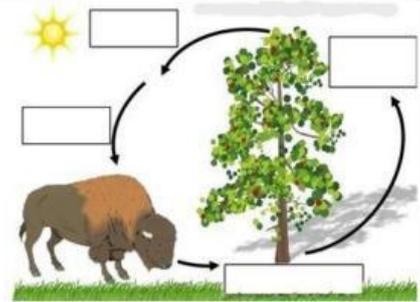
- a. Fungi are producers and plants are consumers.
- b. Fungi are herbivores and plants are omnivores.
- c. Plants are producers and fungi are consumers.
- d. Plants are herbivores and fungi are omnivores.

Q14. Which list best describes the components of the *geosphere*?



- a. nitrogen, oxygen, water vapor, carbon dioxide and other gases
- b. solid rock, molten rock, soil, landforms
- c. water in all three states
- d. plants, animals, humans, decomposers

Q15. Compare the *intake* and *release* of gases by *producers* and animals.

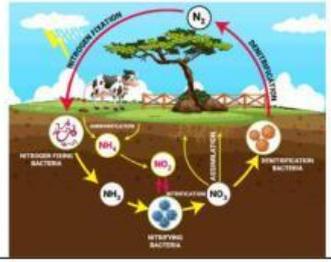


- a. Animals take in carbon dioxide and release oxygen. Producers take in oxygen and release carbon dioxide.
- b. Producers take in nitrogen and release oxygen. Animals take in oxygen and release nitrogen.
- c. Producers take in hydrogen and release nitrogen. Animals take in nitrogen and release oxygen.
- d. Producers take in carbon dioxide and release oxygen. Animals take in oxygen and release carbon dioxide.

Q16. What would the result be if plants grow too close together?

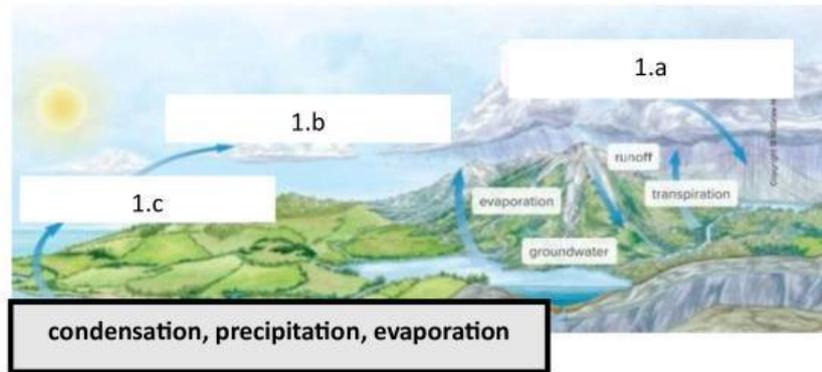


- a. The plants would compete for the same resources.
- b. The plants would grow quickly.
- c. The plants would receive more sunlight.
- d. The plants' growth would not be affected.

<p>Q17. Predict the outcome if the <i>prey population</i> in an <i>ecosystem</i> increased.</p>	
<p>a. The producer population will not be affected.</p>	
<p>b. The producer population will decrease.</p>	
<p>c. The number of decomposers will increase.</p>	
<p>d. The producer population will increase.</p>	
<p>Q18. Describe what would happen when an <i>invasive species</i> is introduced into an <i>ecosystem</i>.</p>	
<p>a. They do not affect any part of the ecosystem.</p>	
<p>b. They affect the amount of matter in an ecosystem.</p>	
<p>c. They can harm the environment, the economy and even human health.</p>	
<p>d. They affect the amount of energy in an ecosystem.</p>	
<p>Q19. Air is made up of 78% <i>nitrogen</i>, but few living things can use <i>nitrogen gas</i>. Select a suitable explanation for how nitrogen is made available to living things.</p>	
<p>a. Nitrogen gas is produced during photosynthesis.</p>	
<p>b. Living things do not need nitrogen to survive.</p>	
<p>c. Nitrogen gas is fixed and then absorbed by plants. When animals eat plants, they take in nitrogen stored in plants.</p>	
<p>d. Nitrogen gas condenses and is then absorbed by living things.</p>	
<p>Q20. How could you identify whether a <i>consumer</i> is an <i>omnivore</i>?</p>	
<p>a. It would consume both plants and animals.</p>	
<p>b. It would consume plants only.</p>	
<p>c. It would consume animals only.</p>	
<p>d. It would consume prey only.</p>	

Part (2): Writing Questions

Q1. Study the image below to answer the questions that follow.



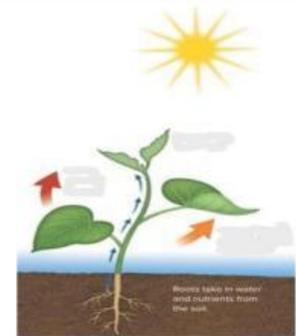
a. Label 1a, 1b and 1c selecting from the words found in the box above.

Q2. Study the image below and answer the questions:

2.a Identify the process demonstrated in the above image:

2.b Name the gas used during this process:

2.c Name the gas released after the process:



Q3. Use the image below to answer the questions:

3a. List one factor from this ecosystem that is part of the geosphere:

3b. List one factor from this ecosystem that is part of the biosphere:

3c. List one solid form of the hydrosphere that you can observe in the image:



Q4. The table shows the average annual rainfall in California. Use the data in the table and the map, to answer the questions.

4a. Which city experienced the highest rainfall?.....

4b. Which city experienced the lowest rainfall?.....

4c. **Compare** the rainfall in the northern and southern parts of the state:

.....

City	Annual Rainfall Averages from 1981-2010
Sacramento	470 mm (18.5 in)
San Francisco	601 mm (23.7 in)
Fresno	292 mm (11.5 in)
Los Angeles	379 mm (14.9 in)
San Bernardino	407 mm (16.0 in)
San Diego	263 mm (10.3 in)



Q5. Study the image and answer the questions based on it.



5a. Identify two *biotic factors* in the image:

.....

5b. Describe the *relationship* between the two animals in the image:

.....

5c. Write down the type of *consumer* that each animal represents.

Cheetah (.....) & The deer (.....)

Q6. Khaled is observing a lake. He wonders how the water in the lake is included in the *water cycle*. Place the stages of the water cycle in order:



- () Large water droplets fall to the ground from the clouds.
- () Water vapor cools and condenses on dust particles forming clouds.
- () Energy from the sun causes the water in the lake to evaporate. Water droplets combine in the clouds to form larger droplets.

Q7. Explain three ways in which the hydrosphere interacts with the *geosphere*:

7a:

7b:

7c:



Q8. Study the image below before answering the questions:

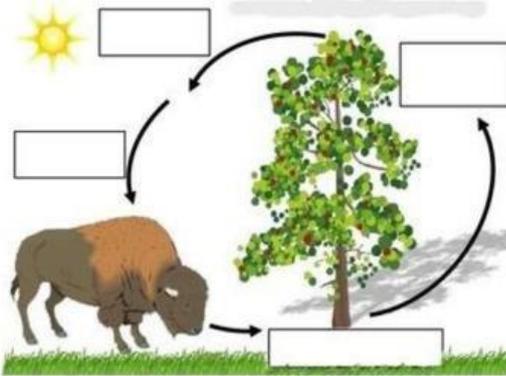
8a. Identify the gases circulated in this cycle:

.....

8b. Name the gas that *plants release during photosynthesis*?

.....

8c. Provide the name of the *gas that animals release* which is required for *photosynthesis* :.....



Q9. The image below shows Earth's major systems.



9a. One of the Earth's system that represent all of Earth's living things :.....

9b. All of Earth's liquid, solid and gaseous water makes up the:

9c. The layer of gases surrounding Earth is called the:

Q10. An organism that is introduced to a new ecosystem and causes harm is an *invasive species*.



10a. Identify the *invasive species* shown in the image above:

10b. Explain why this species was introduced to Australia in the 1930's:

.....
.....

10c. Describe one way in which this species caused harm to the ecosystem:

.....
.....

***** End of the Exam*****