Science Department

Mock Exam

Term 3 - 2023/2024

Grade: 6 (General)

Copy 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

Reviewed by Council 6 Science AQIO

Part 1
20 Questions- Multiple choice

Q1. E-Remember **The way a trait is expressed or appears is known as : _____.**	
a.	**Genotype**
b.	**Phenotype**
c.	**Inheritance**
d.	**Gene**
Q2. E-Understand **Animals lose their habitats because of _____.**	
a.	**Deforestation**
b.	**Urbanization**
c.	**Climate Change**
d.	**Reforestation**
Q3.M-Apply **Which is the most likely description of a seed that is dispersed by wind?**	
a.	**It can float.**
b.	**It has a thick, hard shell.**
c.	**It has a waterproof coating.**
d.	**It is light and small.**
Q4.M-Remember **In _____, an offspring grows from piece of the parent organism.**	
a.	**Fission**
b.	**Budding**

c.	**Regeneration**
d.	**Sexual reproduction**

Q5.M-Remember

Which of the following causes air pollution?

a.	**Volcanic eruptions**
b.	**Burning of fossil fuels**
c.	**Forest fires**
d.	**All the above**

Q6.E-M-Understand

Which best describes something you could do to reduce pollution when disposing of household chemicals?

a.	**Make sure they get into landfills.**
b.	**Make sure they don't enter storm drains.**
c.	**Make sure to put them out with other trash.**
d.	**Make sure to pour them down the sink.**

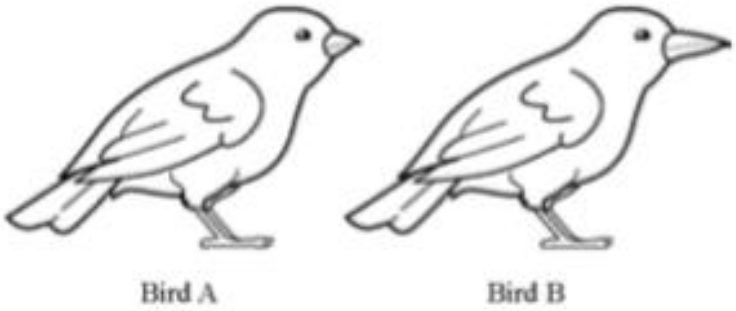
Q7.M-D-Analyze

The mating season for white-tailed deer is just two to three months long. Male deer grow antlers before each breeding season. They use their antlers to fight each other to establish dominance in bachelor herds and earn the right to mate with certain females. Scientists claim that this aggressive behavior increases the chances of successful reproduction for the entire deer population. Which statement best supports this claim?

a.	**Healthier male deer can grow larger antlers.**
b.	**Healthier males are better able to protect their young.**
c.	**This behavior extends the length of the mating season.**
d.	**This behavior gives healthier males a better chance to mate.**

Q8.M-D-Apply

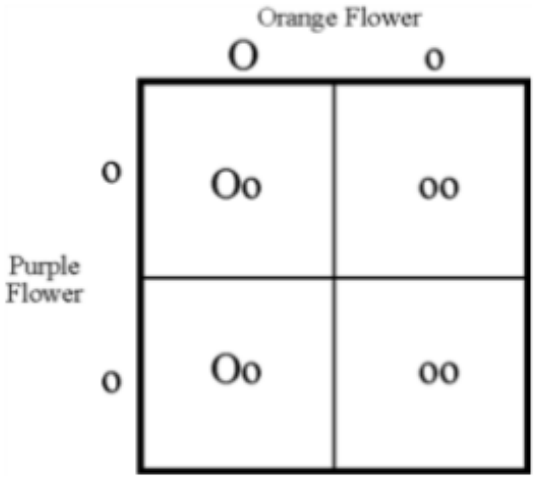
Bird A has the genotype <u>bb</u> for bill length, and Bird B is <u>BB</u>. The bills (beak) of their offspring would be:



a.	**Long in 100% of the offspring.**
b.	**Short in 100% of the offspring.**
c.	**Long in 50% of the offspring.**
d.	**Short in 50% of the offspring.**

Q9.D-Apply

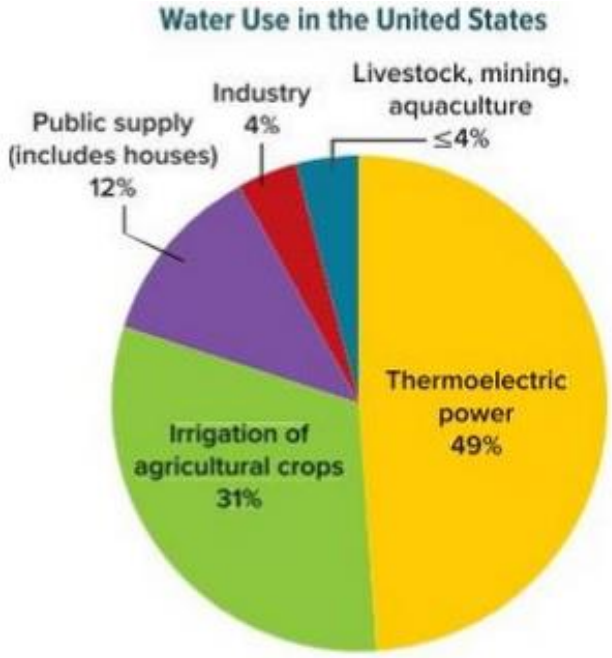
A heterozygous orange-flowered plant is crossed with a homozygous purple-flowered plant. If orange is a dominant allele and purple is recessive, what color ratio will the flowers of the offspring plants have?



a.	**1 purple: 3 orange**
b.	**4 purple: 0 orange**
c.	**2 purple: 2 orange**
d.	**0 purple: 4 orange**

Q10.E-M-Analyze

The pie chart represents human water usage in the USA. Which sector consumed the least amount of water?



a.	**Thermoelectric power**
b.	**Public supply**
c.	**Industry**
d.	**Livestock**

Q11.E-M- Analyze

What is the main purpose of some animal behaviors and specialized plant structures in reproduction?

a.	**Attract predators**
b.	**Ensure survival**
c.	**Enhance growth**
d.	**Increase the chances of successful reproduction.**

Q12.M-D Apply

The table lists a family's average water usage per day.

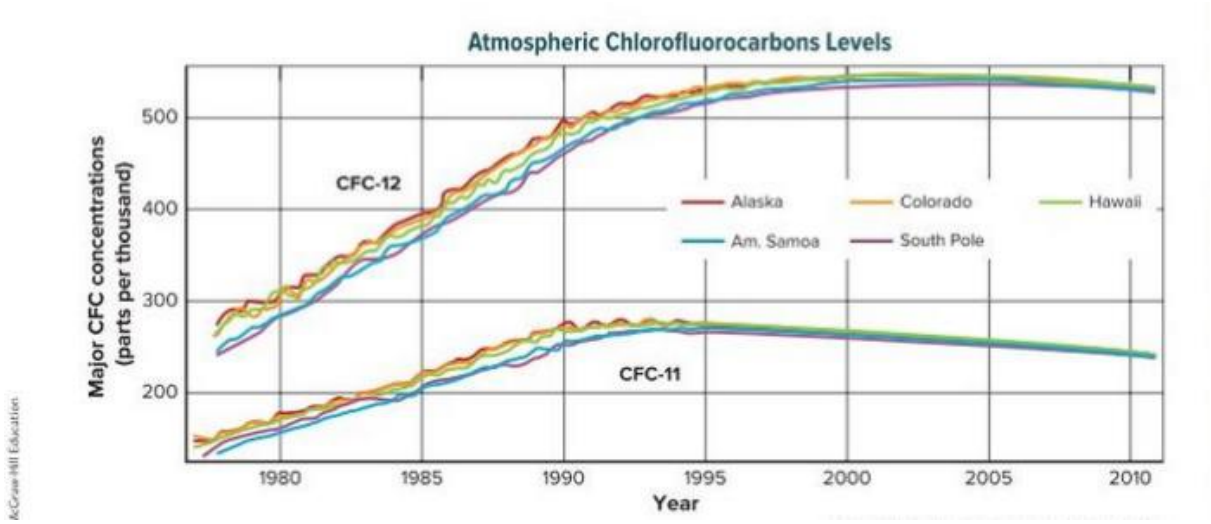
Daily Activity	Water Used
Taking a short shower	95 L
Taking a bath	150 L
Running the dishwasher	38 L
Watering lawn and plants	30 L

The following are three ways the family could reduce how much they use water in a week . Which one of them will save the most water?

a.	**Substitute a short shower for bath five times a week.**
b.	**Run the dishwasher five times a week instead of seven times a week.**
c.	**Water the plants three times a week instead of five times a week.**
d.	**None of the above.**

Q13.M-Analyze

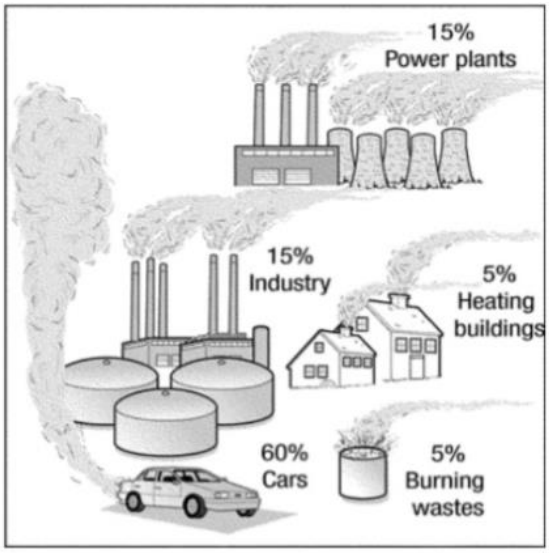
What patterns do you notice in the data about CFC12.



a.	**CFC12 has steadily increased over the years.**
b.	**CFC12 has steadily decreased over the years.**
c.	**CFC12 has the same growth as CFC11.**
d.	**CFC12 is not an issue for the atmosphere.**

Q14.D-Evaluate

The graphic shows where air pollution begins in a local community.



Which of the following would be the most effective way to reduce air pollution in this community?

a.	**pass a law that states people cannot burn wastes**
b.	**help people to heat their homes more efficiently**
c.	**make traveling by bicycle easier and safer**
d.	**invent a way to trap particulate matter from industry**

Q15.D-Evaluate

A group of students designs a model landfill. The purpose of the design is to keep as much liquid as possible in the landfill. Which best describes a step the students should do as they plan their model?

a.	**They should decide what kind of liquid to pour on the model.**
b.	**They should compare their model with another group's.**
c.	**They should decide how to collect the liquid that runs out of the model.**
d.	**They should see how many landfills there are in the United States.**

Q16.M-D-Evaluate

Decreasing the use of fossil fuels like coal and oil will decrease all the forms of air pollution except:

a.	**Particulate matter**
b.	**Photochemical smog**
c.	**Acid precipitation**
d.	**CFCs**

Q17.D-Evaluate

Which would provide the most reliable data about the genetic factors that affect plant growth?

a.	**two plants of different species grown in the same conditions**
b.	**three plants of different species, each given a different amount of light**
c.	**one plant grown in ideal environmental conditions**
d.	**two plants of the same species grown in the same environmental conditions**

Q18.E-M-Understand

Which describes a step that people can take to help minimize the effects of using land for agriculture?

a.	**Use more land for farms.**
b.	**Increase the number of different pesticides used.**
c.	**Remove crops quickly to increase erosion of soil.**
d.	**Plant crops that may attract different kinds of insects.**

Q19.E-Remember

Hydra reproduce by: _____.

a.	**Budding**
b.	**Fission**
c.	**Regeneration**
d.	**Sexual reproduction**

Q20.E-Understand

Which animal behavior attracts mates by competing with members of the same species?

a.	**Aggression**
b.	**Submission**
c.	**Courtship**
d.	**Territory**

Part 2

10 Questions- Written questions

Q1.E- Remember

Complete the table and state of each example is sexual or asexual reproduction.

a. A starfish regenerating a lost arm to form a new individual.	
b. A flowering plant producing seeds through pollination and fertilization.	
c. A male and female bird combining their genetic material to form a new offspring.	
d. A single celled organism divides into half to create two identical daughter cells.	

Q2.E-M-Understand

Describe the difference between innate and learned behavior.

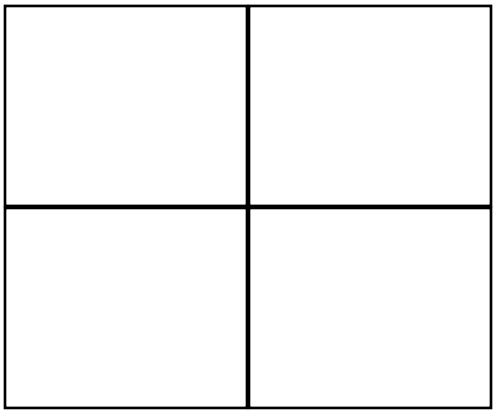
Q3. D-Create

Use Punnett Square to answer following questions:

3a. Complete the square with the cross of:

Male fly with Curly Wings (BB)

and Female fly with straight wings (bb)



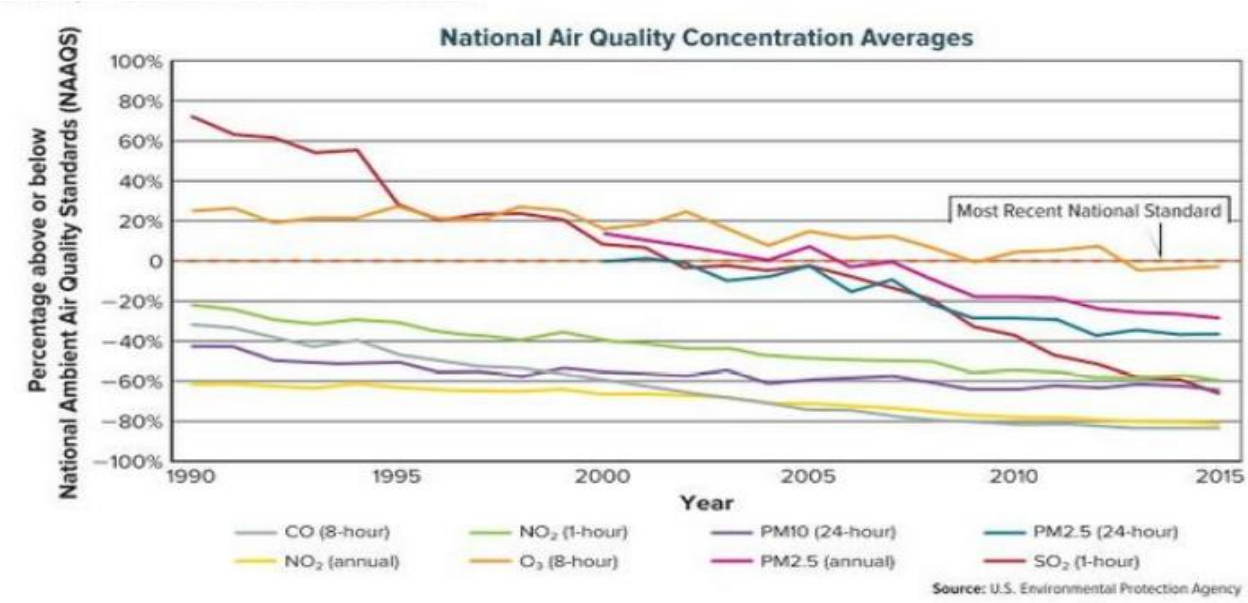
3b. What is the phenotype ratio?

Curly wings: Straight wings

…..: …..

Q4.D-Evaluate

Study the graph and answer the questions that follow.



4a. What information does this graph show?

4b. What trends do you notice in the data?

4c. Using the data, give a reason why air pollutants are increasing or decreasing?

Q5.E-M-Remember/Understand

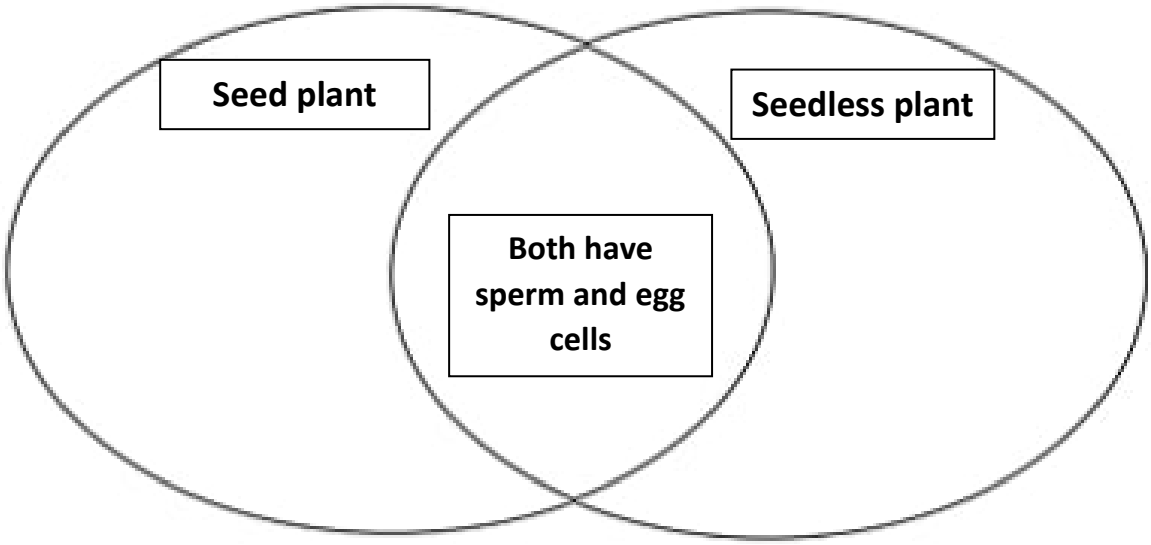
Look at the picture and answer the questions.

5a. What phenomenon is shown?

5b. Write 2 impacts this has on land.

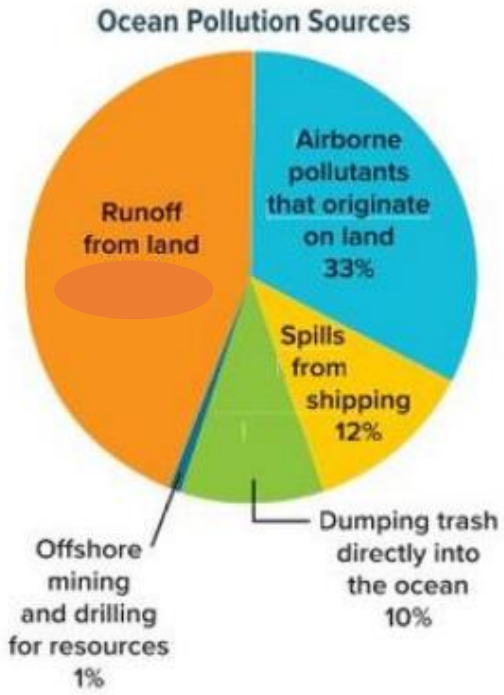
Q6.M-D-Analyze

Compare Sexual reproduction in seed and seedless plants.



Q7.E-Apply

Calculate the percentage of runoff from land as a source of ocean pollution.



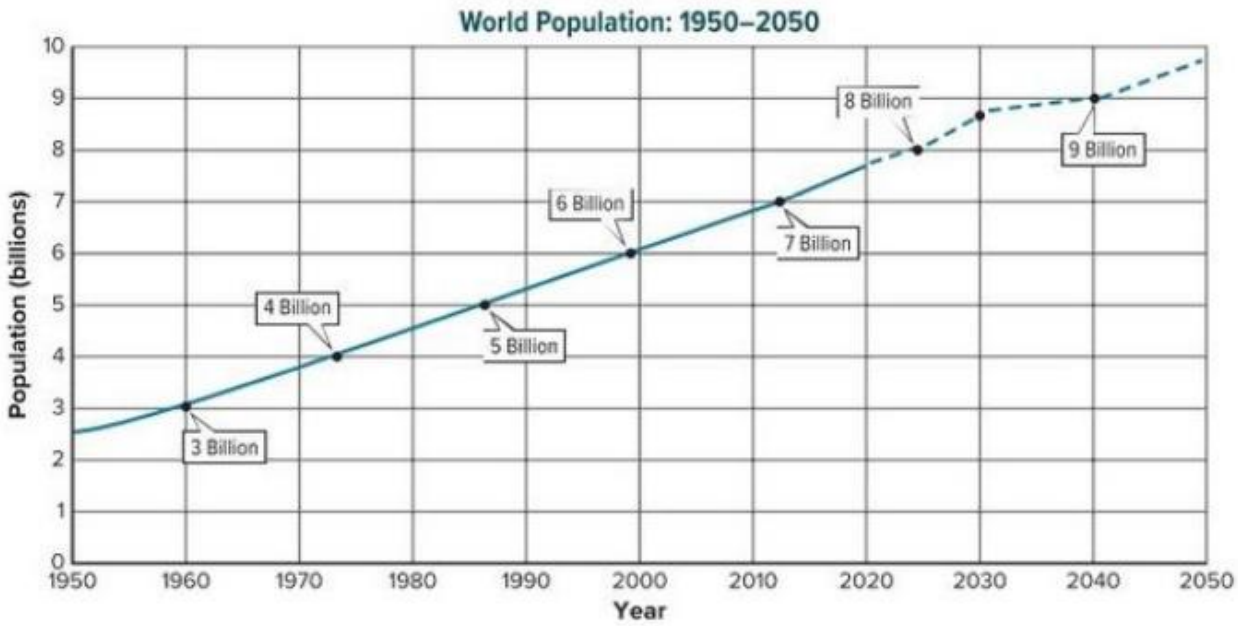
Q8.M-Apply

Study the pictures and ansv

8a. What type of air pollution is shown?

8b. Which 2 chemicals react to form this pollution?

Q9. E-Analyze



9a. What trend is shown here?

9b. What happens as the population grows? (Use the term natural resources in your answer).

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

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