

Biology A - Final exam review

Yeah!

#1

- Which organisms should be the most abundant (have the largest population) in a community?
 - A. Producers
 - B. Secondary Consumers
 - C. Decomposers
 - D. Primary Consumers

#1

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#2

- An organism which needs to ingest food for energy and growth is a
- A. producer
 - B. heterotroph
 - C. autotroph
 - D. niche

#2

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- A. producer
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 - C. autotroph
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#3

- A bacteria that releases nitrogen back into the atmosphere.
- A. nitrifying
 - B. denitrifying
 - C. nitrogen fixing
 - D. decomposing

#3

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 - B. **denitrifying**
 - C. nitrogen fixing
 - D. decomposing

#4

- The process in which gas cools to become a liquid is called...
- A. evaporation
 - B. osmosis
 - C. condensation
 - D. transpiration

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#5

- The way plants return water to the environment
-
- A. evaporation
 - B. osmosis
 - C. condensation
 - D. transpiration

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-
- A. evaporation
 - B. osmosis
 - C. condensation
 - D. transpiration

#6

- The part of a leaf where most of the chloroplasts can be found?
- A. stoma
- B. palisade mesophyll
- C. spongy mesophyll
- D. epidermis

#6

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- A. stoma
- B. palisade mesophyll
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- D. epidermis

#7

List the layers of a leaf in order from the top to the bottom.

Which layers have the following?

- hair
- wax
- space for air and water
- stoma and guard cells

#7

- **Layers are:**

Upper epidermis and/or cuticle

Palisade Mesophyll

Spongy Mesophyll

Lower epidermis

Hair and wax are on the cuticle or upper epidermis

Air and water are stored in the spongy layer

Stoma and guard cells are found on the epidermis

#8

Relationships: Is it

**Mutualism, Parasitism, Commensalism,
or Predator/prey?**

- The bee pollinates the flower while getting food from the flower
- “Ouch” yelled Jason as a mosquito bit his elbow
- Bacteria in your intestines get food and water from you and they, in turn, help you digest your food.
- Oh no, your dog has worms!

#8

Relationships: Is it

**Mutualism, Parasitism, Commensalism,
or Predator/prey?**

- The bee pollinates the flower while getting food from the flower = M
- “Ouch” yelled Jason as a mosquito bit his elbow = P
- Bacteria in your intestines get food and water from you and they, in turn, help you digest your food = M
- Oh no, your dog has worms! = P

#9

- What am I?
 - I don't eat meat!
 - I break down dead things and return nutrients to the soil
 - I eat meat and veggies
 - No one preys on me

#9

- What am I?
 - I don't eat meat! = herbivore
 - I break down dead things and return nutrients to the soil = decomposer
 - I eat meat and veggies = omnivore
 - No one preys on me = top predator

#10

- What is the formula for photosynthesis?

#11

- What is the formula for Animal respiration?

10 and #11

- The formulas are exact opposites of one another
- Photosynthesis



Animal respiration (cellular respiration)



#12

- Draw a food chain or food web

#13

- List ways that solid carbon can end up in the atmosphere as carbon dioxide

#13

- List ways that solid carbon can end up in the atmosphere as carbon dioxide

burn anything made of carbon:

gas

oil

coal

wood, leaves, paper, grass

bodies

#14

- What can happen if global warming occurs?

#14

- What can happen if global warming occurs?

ice caps and glaciers melt

sea levels rise

flooding

habitat/climate change

adapt or die

#15

Which man invented the light microscope?

- A. Robert Hooke
- B. Schwann
- C. van Leeuwenhook
- D. Schleiden

#15

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- D. Schleiden

#16

- Which man came up with the name “cells”?
- A. Robert Hooke
 - B. Schwann
 - C. Anton van Leeuwenhook
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#16

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#17

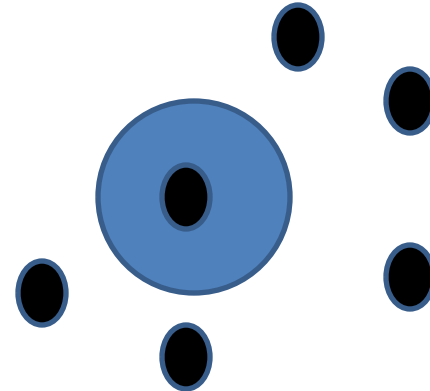
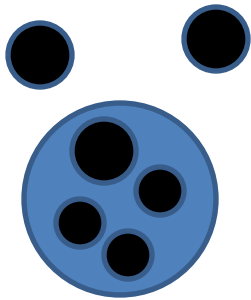
- **Membranes – do you want them to be Impermeable or Semi-permeable.**
- coffee filter
- trash can
- tea bag
- roof
- aquarium

#17

- **Membranes – do you want them to be Impermeable or Semi-permeable.**
- coffee filter = S
- trash can = I
- tea bag = S
- roof = I
- aquarium = I

#18

- Which way would these molecules flow? In or out?



#18

- Which way would these molecules flow? In or out?

one flows out two flow in

Things move from a high concentration to a low concentration until equilibrium is reached.

This is the Law of Diffusion!

#19

- Label the cell parts -

http://www.cellsalive.com/cells/cell_model.htm

#20

Cell cycle – what are the steps?

http://www.cellsalive.com/cell_cycle.htm

#21

- Mitosis – is it.....

A = prophase B = metaphase

C = anaphase D = telophase

- the chromatids shorten, thicken and become visible
- the chromatids unwind and disappear from view
- the chromosomes are in the middle of the cell
- spindle fibers start to form
- the sister chromatids are pulled apart to opposite sides of the cell

#21

- Mitosis – is it.....

A = prophase B = metaphase

C = anaphase D = telophase

- the chromatids shorten, thicken and become visible = P
- the chromatids unwind and disappear from view = T
- the chromosomes are in the middle of the cell = M
- spindle fibers start to form = P
- the sister chromatids are pulled apart to opposite sides of the cell = A

#22

- List several reasons why we need the cell cycle to live.

#22

- List several reasons why we need the cell cycle to live.

Reproduction

Regeneration

Replace dead cells

Repair injuries

What is the relationship to Aging and Cancer?

#23

Things that cause cancer are called...

- A. contagions
- B. remission
- C. carcinogens
- D. metastasis

#23

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- B. remission
- C. **carcinogens**
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#24

When cancer cells have broken off and spread through the body, this is called..

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- B. remission
- C. carcinogens
- D. metastasis

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#25

If the man is FF and the woman is Ff, what are the genotypic probabilities of the offspring?

A. 50% FF, 50% ff C. 50% FF, 50% Ff

B. 25% FF, 50% Ff, 25% ff D. 100% Ff

#25

If the man is FF and the woman is Ff, what are the genotypic probabilities of the offspring?

A. 50% FF, 50% ffC. 50% FF, 50% Ff

B. 25% FF, 50%Ff, 25% ffD. 100% Ff

#26

Having spots is a dominant trait in dogs. If 2 spotted dogs mate but some of the offspring do NOT have spots, what are the genotypes of the parent?

- A. Ss and SsC. both ss
- B. SS and ssD. both SS

#26

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- A. **Ss and Ss** C. both ss
- B. SS and ss D. both SS

#27

The physical appearance of a person is known as their...

- A. genotype
- B. allele
- C. phenotype
- D. genes

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#28

In humans, sex cells contain _____
chromosomes

- A. 24
- B. 48
- C. 46
- D. 23

#28

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chromosomes

A. 24

B. 48

C. 46

D. 23

#29

If a black dog is mated with a white dog and all of the F1 are black, the black gene is

- A. recessive
- B. codominant
- C. dominant
- D. masked

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If a black dog is mated with a white dog and all of the F1 are black, the black gene is

A. recessive B. codominant

C. dominant D. masked

#30

- What do you need to do to get an “A” on this final exam?