

تم تحميل هذا الملف من موقع المناهج الإماراتية



الملف حل المراجعة النهائية للوحدتين السادسة والسابعة

موقع المناهج ← المناهج الإماراتية ← الصف الثاني عشر العام ← علوم ← الفصل الثالث

روابط مواقع التواصل الاجتماعي بحسب الصف الثاني عشر العام



روابط مواد الصف الثاني عشر العام على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

المزيد من الملفات بحسب الصف الثاني عشر العام والمادة علوم في الفصل الثالث

[حل أسئلة الامتحان النهائي](#)

1

[المراجعة النهائية متنوعة بالإجابات النموذجية](#)

2

[أسئلة مراجعة وفق الهيكل واختبارات وزارية سابقة مع الحل](#)

3

[أسئلة مراجعة هيكل امتحان وزاري الفصل الثالث واختبارات وزارية سابقة مع الحل](#)

4

[نموذج هيكل الوزارة امتحان نهاية الفصل الثالث](#)

5

Biology Final Revision

Grad 12 General

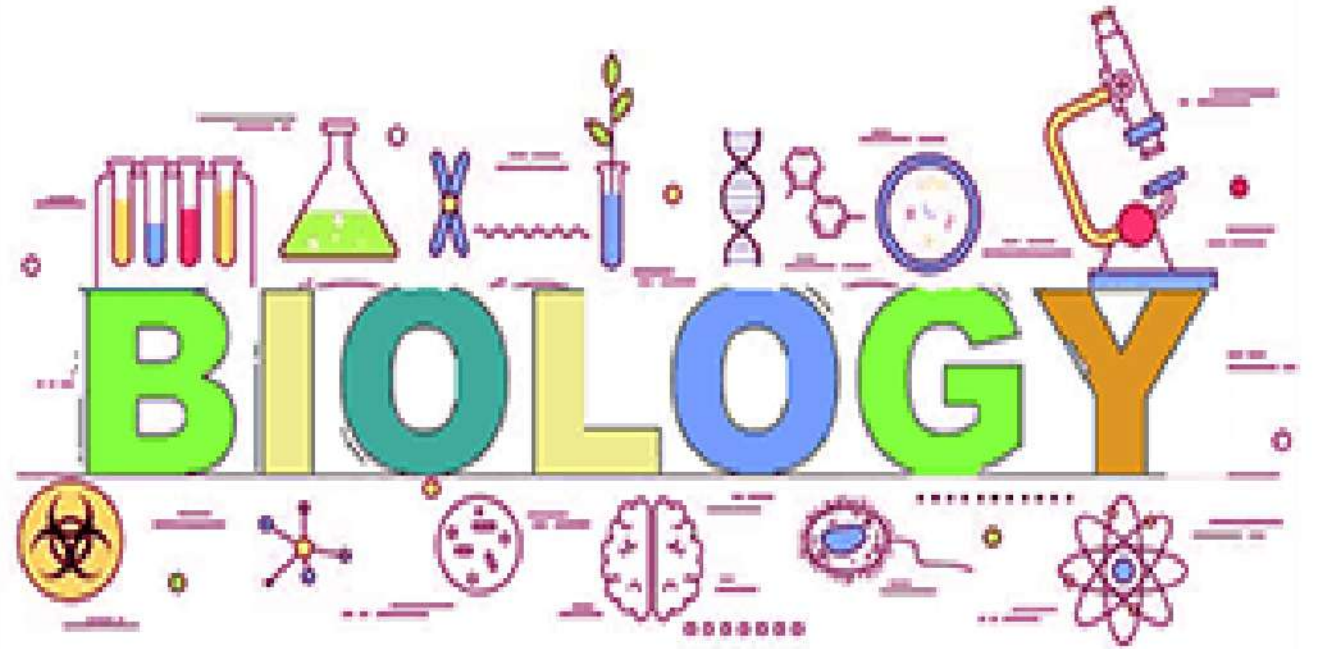
CH6- Principles of Ecology

CH7- Population Ecology

Term 3

2022-2023

Teacher: **Mohammad Rajab**



Name:----- أسم الطالب

CH6- Principles of Ecology

Q 10

Page 107

1- Which are biotic factors in a forest environment?

A- plants and microscopic organisms living in the soil.

B- pH and salt concentration of the soil

C- sunlight, soil type and soil nutrients

D- temperature, air currents and rainfall

Mohamad Rajab

Mohamad Rajab

2- Which would be an abiotic factor for a tree in the forest?

A- a caterpillar eating its leaves

B- wind blowing through its branches.

C- a bird nesting in its branches

D- fungus growing on its roots.

3- Which of the following are considered as biotic factors?

A- Air or water currents

B- Sunlight

C- Migratory animals such as birds

D- Rainfall or nutrients

4- The following are abiotic factors in a forest environment except.....

A- microscopic organisms living in the soil

B- pH and salt concentration of the soil.

C- soil type and soil nutrients

D- temperature, air currents and rainfall

5- The salmon need other members of their species to reproduce and depend on other organisms for food and, in turn, are a food source for other organisms. Which factors in the ecosystem do these organisms represent?

A- Abiotic factors

B- Nonliving factors

C- Biotic factors

D- Environmental factors



Q 1-4 Page 158

6- Organisms of a single species that share the same geographic location at the same time make up ...

A. Biosphere

B. ecosystem

C. biological community

D. Population

20- The act of one organism consuming another organism for food is _____.

- A. Commensalism
B. Competition
C. Mutualism
D. **predation**

Q 3 Page 162

21- The lichens benefit from the relationship by gaining more exposure to sunlight, but they do not harm the tree. What type of symbiotic relationship is this?

- A. Predation
B. competition
C. **Commensalism**
D. parasitism



22- A brown-headed cowbird lays its eggs in another bird's nest and abandons the eggs. The host bird incubates and feeds the young cowbirds. What type of symbiotic relationship is this?

- A. External parasitism
B. Competition
C. Mutualism
D. **Brood parasitism**



23- Determine the type of symbiotic relationship you see in the picture

- A. **External parasitism**
B. Internal parasitism
C. Commensalism
D. Brood parasitism



24- Determine the type of symbiotic relationship you see in the picture (shark and remora):

- A. Predation
B. competition
C. **Commensalism**
D. parasitism



Q 8 Page 164

Mohamad Rajab
25- Which is a detritivore?

- A- cat
B- mouse
C- sunflower
D- **crayfish**

26- Which of the following is an example of Omnivores?

- A- **Bears**
B- Snakes
C- The eagles
D- wolves

27- What type of organism returns nutrients to an ecosystem?

- A- **decomposer** B- primary producer
C- secondary producer D- top level consumer

28- How do detritivores obtain their energy in an ecosystem?

- A. **They feed on fragments of dead plants and animals.**
B. They feed on organisms by releasing digesting enzymes.
C. They get energy from inorganic substances to make food.
D. They use chlorophyll to capture energy from the sun.

29- Food chains, food web and ecological pyramids are models used to show.....

- A- **How energy moves through ecosystems** B- Symbiotic relationships.
C- The levels of organization D- Types of ecosystems

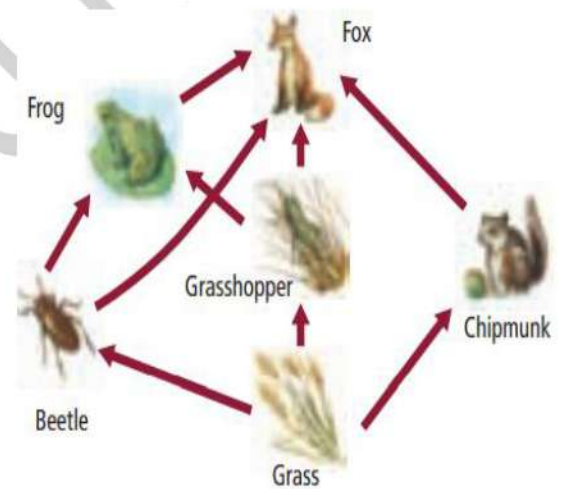
Q 6 Page 165 Figure 13

30- What does the illustration represent?

- A- **food web** B- an ecological pyramid
C- a food chain D- a pyramid of energy

31- which organisms in the illustration is an autotroph?

- A- frog B- fox
C- grasshopper D- **grass**

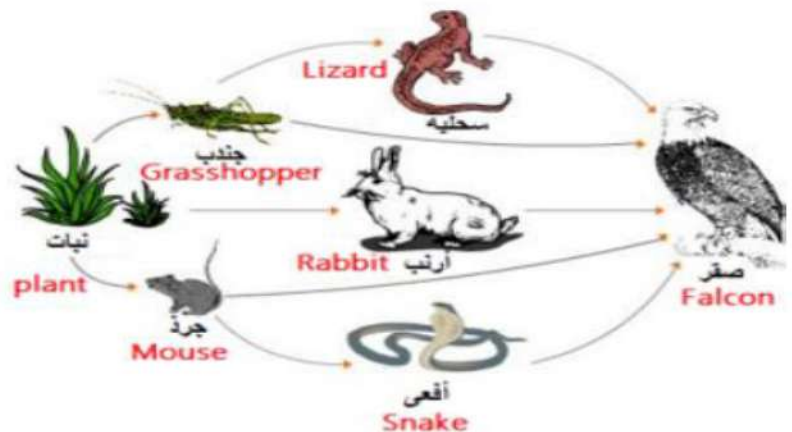


32- The first trophic level in all ecosystems:

- A- The Sun B- **Autotrophs**
C- Herbivore D- Detritivore

33- How many food chains are there in the food web shown below?

- A- 4 B- **5**
C- 6 D- 7



34- Which part of the food web contains the greatest biomass?

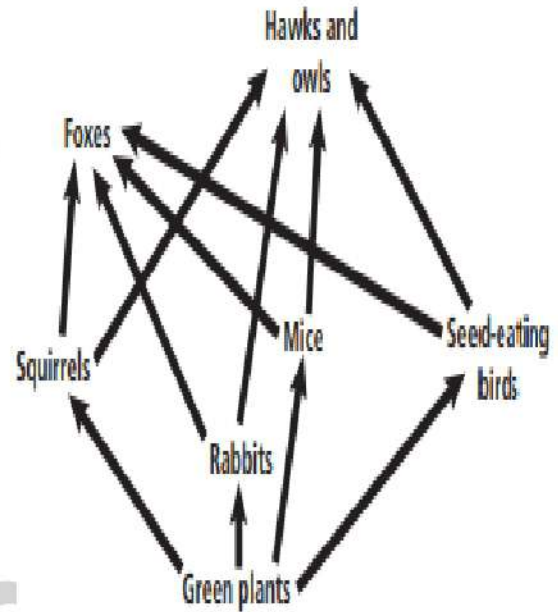
- A- Foxes B- **green plants**
C- Mice D- rabbits

35- Which part of the food web above contains the least biomass?

- A- **Foxes** B- green plants
C- Mice D- rabbits

36- What happens to the energy that the fox uses for maintaining its body temperature?

- A. It is taken up by decomposers that consume the fox.
B. **It moves into the surrounding environment.**
C. It stays in the fox through the metabolism of food.
D. It travels to the next trophic level when the fox is eaten.



Q 7 Page 166 Figure 14

37- How much energy is transferred from one level to another in the energy pyramid?

- A- 1% B- **10%**
C- 90% D- 100%

38- What type of energy is lost in the energy pyramid?

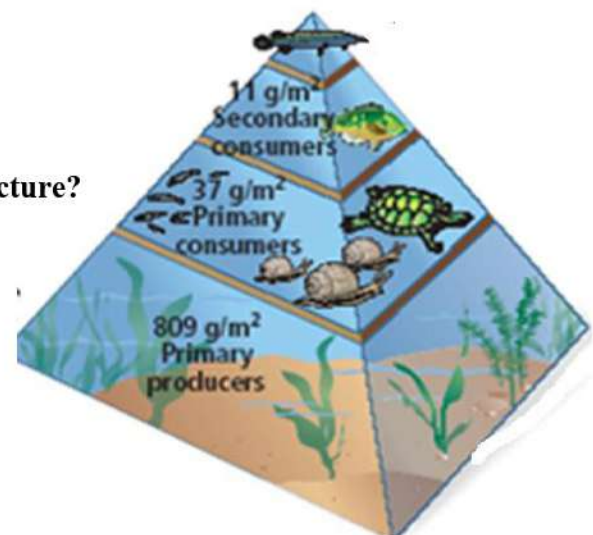
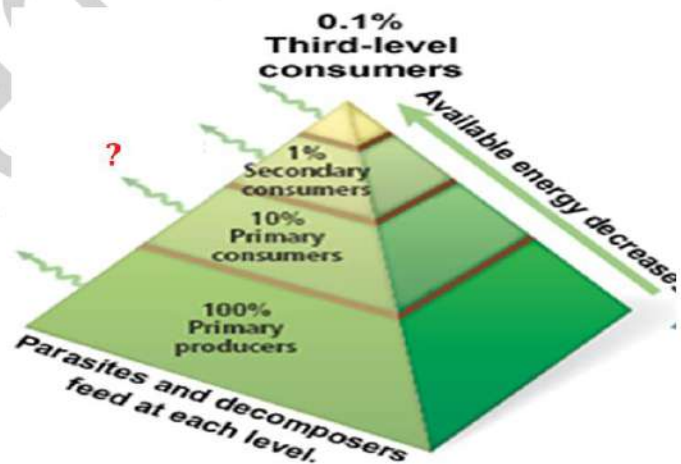
- A- light B- chemical
C- **heat** D- nuclear

39- In an ecosystem, the amount of energy at the primary producer is 900 kJ. How much energy is in the secondary consumers (third level)?

- A- 0.9 kJ B- **9 kJ**
C- 0.1 kJ D- 90 kJ

40- What is the name of the ecological pyramid shown in the picture?

- A. Pyramid of Energy
B. **Pyramid of Biomass**
C. Pyramid of Numbers
D. Pyramid of Food



Q 12 Page 168 **Figure 16**

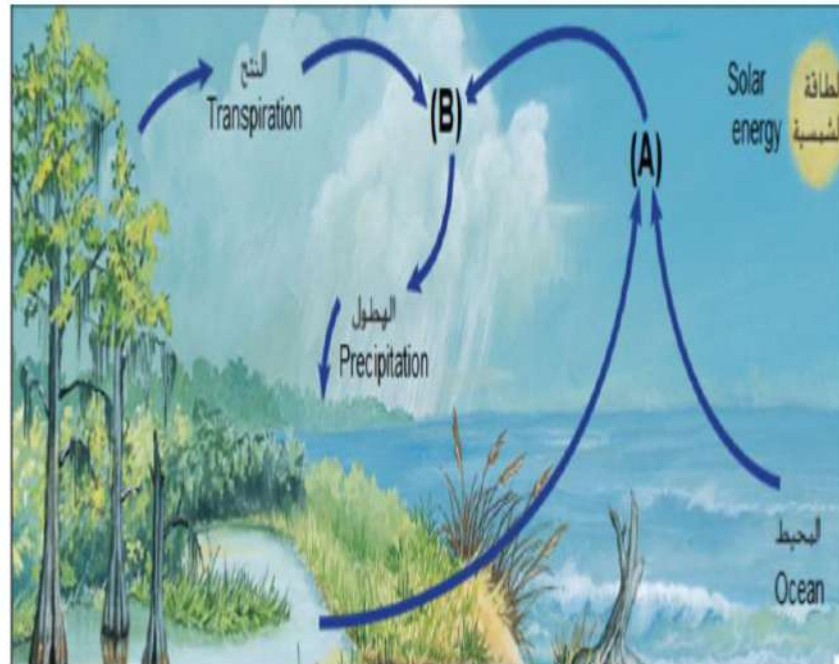
41- The water cycle: What do the letters (A) and (B) represent?

(A): Evaporation - (B): Condensation

(A): Condensation - (B): Evaporation

(A): Lake - (B): Runoff

(A): Runoff - (B): Lake



42- Freshwater constitutes only about of all water on Earth

A- 1%

B- 3%

Mohamad Rajab

C- 31%

D- 69%

43- 69 percent of all freshwaters found in

A- Ocean

B- Underground

C- Icecaps and Glaciers

D- Atmosphere

Q 9 Page 169 **Figure 16**

44- What are the two major life processes that involve carbon and oxygen ?

A- coal formation and photosynthesis.

B- photosynthesis and respiration.

C- fuel combustion and open burning.

D- death and decay.

Mohamad Rajab

45- Which of the following is a form of the long-term carbon cycle?

A- Carbohydrates in food

B- Carbon dioxide in the atmosphere

C- proteins in living organisms

D- Calcium carbonate in limestone rock

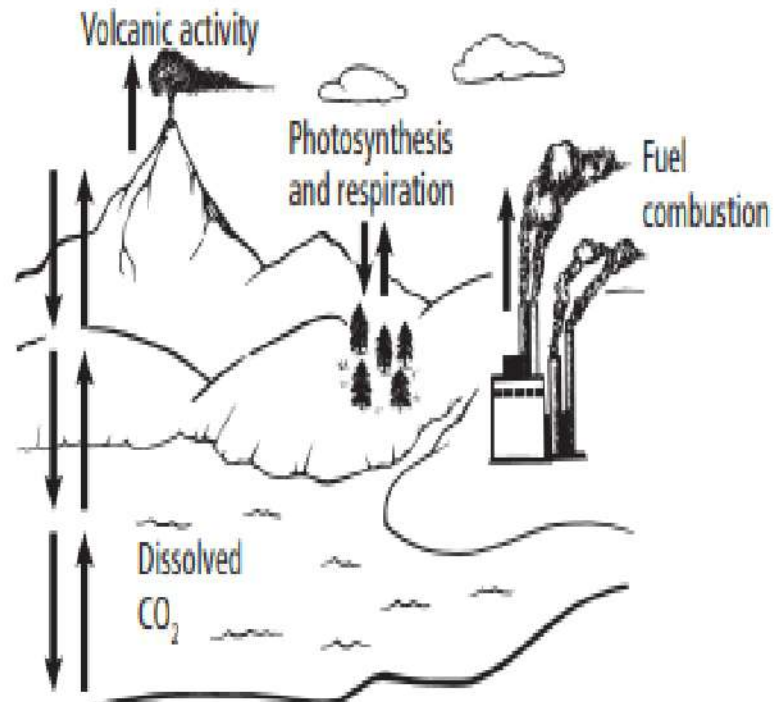
46- Which part of the diagram below relates to carbon leaving a long-term cycle?

- A. Dissolved CO₂
- B. **Fuel combustion**
- C. Photosynthesis and respiration
- D. Volcanic activity

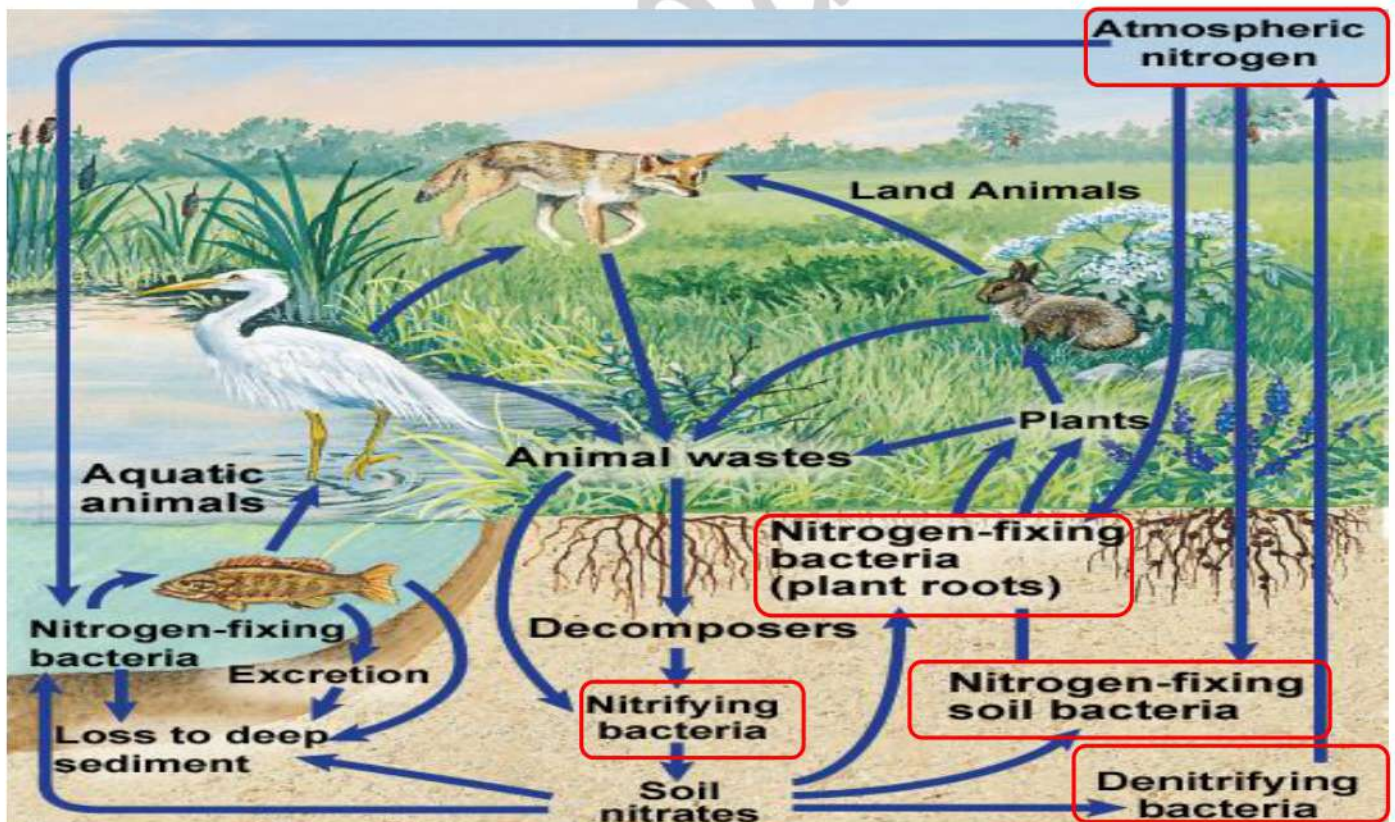
Mohamad Rajab

47- Which part of the diagram relates to carbon moving from an abiotic to a biotic part of the ecosystem?

- A. Dissolved CO₂
- B. Fuel combustion
- C. **Photosynthesis and respiration**
- D. Volcanic activity

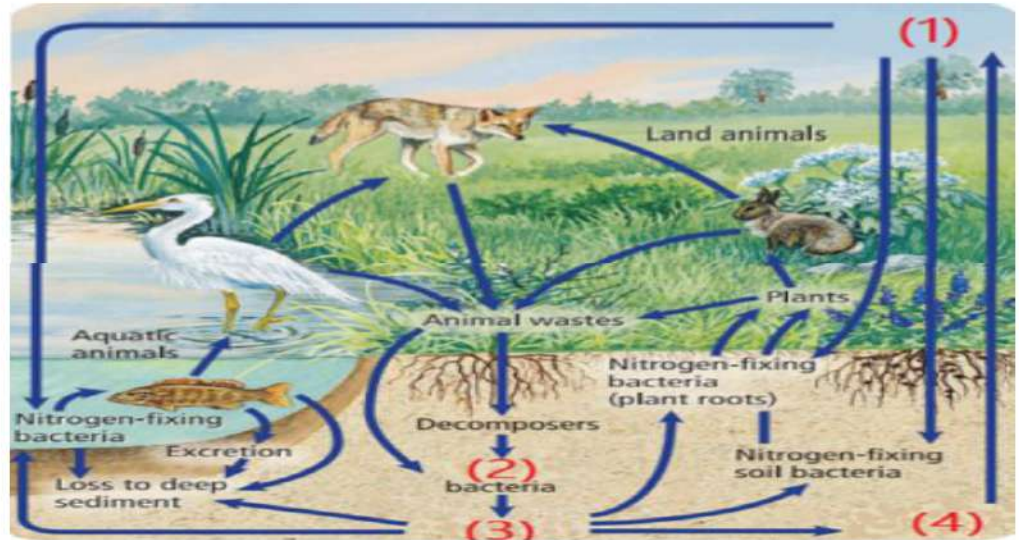


Q 11 Page 170 Figure 19



48- Nitrogen cycle: What does the number (4) refer to?

- A- Denitrifying bacteria
- B- Nitrifying bacteria
- C- Atmospheric nitrogen
- D- Soil nitrates



49- What is the name of the process in which bacteria and lightning convert nitrogen into compounds that are useful to plants?

- A- Ammonification
- B- Nitrate cycling
- C- Denitrification
- D- Nitrogen fixation

50- Which process returns nitrogen to the food web ?

Mohamad Rajab

- A- Decomposition
- B- Nitrogen fixation
- C- Denitrification
- D- Nitrification

51- Why is nitrogen often considered a factor limiting the growth of producers?

- A- The supply of nitrogen in a food web depends on the amount of nitrogen that is fixed.
- B- Nitrogen is an element found in carbohydrates.
- C- The largest concentration of nitrogen is found in the atmosphere.
- D- Plants and animals can use nitrogen directly from the atmosphere.

Q 10-13 Page 171 Figure 20

52- Which process locks phosphorus in a long-term cycle?

- A. organic materials buried at the bottom of oceans
- B. phosphates released into the soil
- C. animals and plants eliminating wastes
- D. rain eroding mountains

53- Phosphorus moves from the short-term cycle to the long-term cycle through.....

- A- weathering or erosion of rocks
- B- precipitation and sedimentation to form rocks**
- C- dead organisms or producing waste products
- D- Plants absorb the phosphorus

Mohamad Rajab

54- It is present only in small amounts in soil and water. Therefore, it is a factor that limits the growth of producers:

- A- Carbon
- C- Phosphorus**
- B- Nitrogen
- D- Oxygen

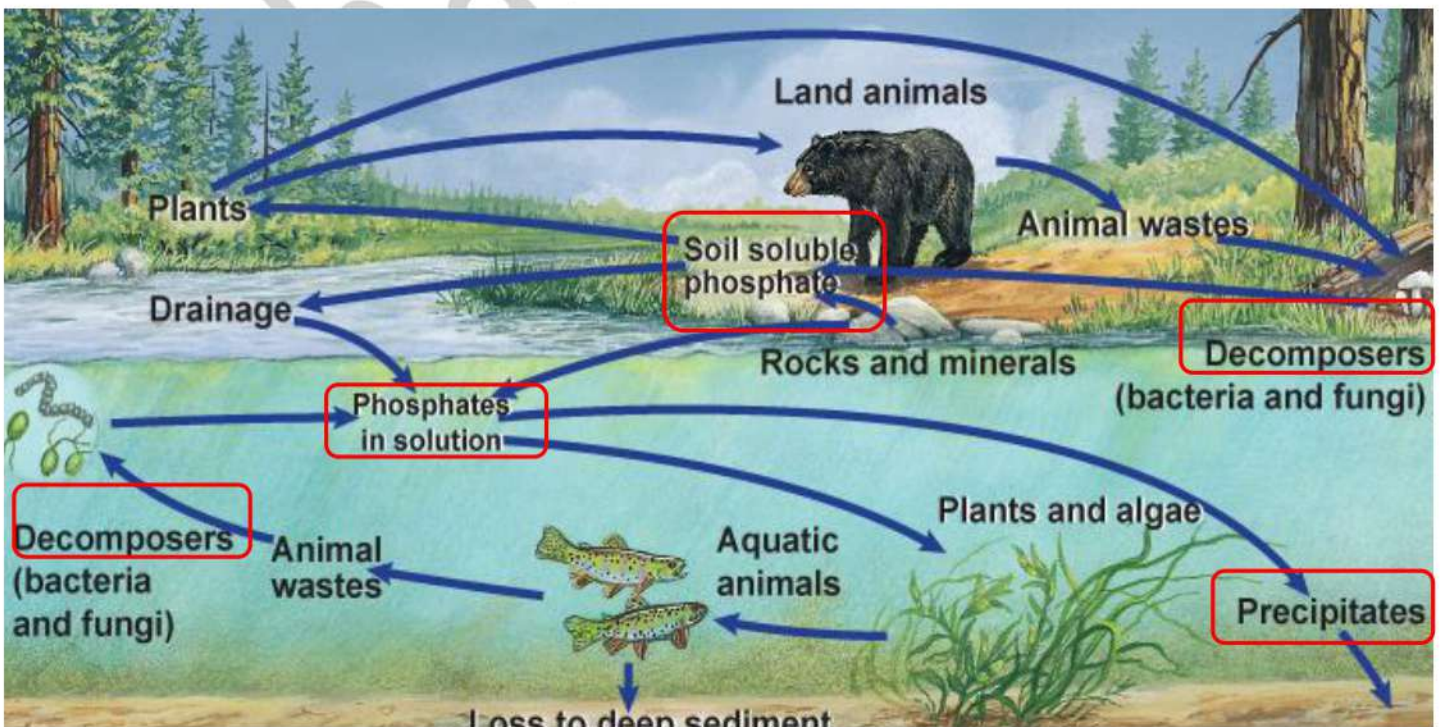
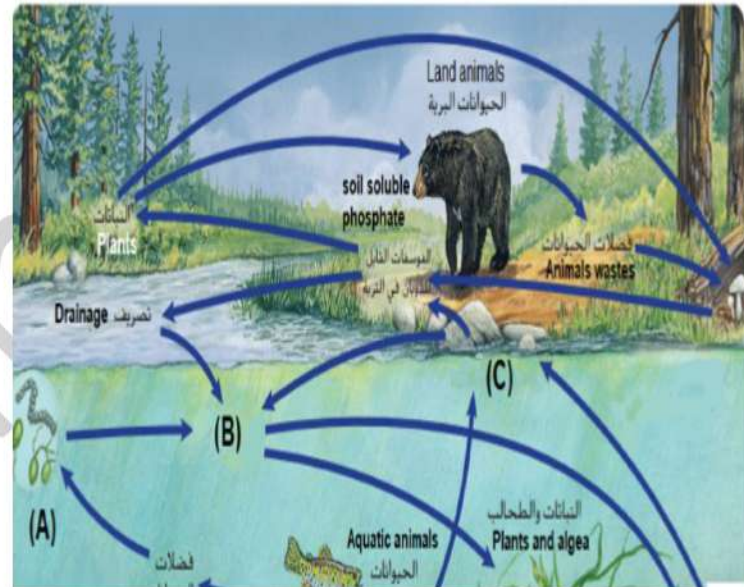
55- Phosphorous cycle: What do letters (A) and (B) represent?

(A): Decomposers - (B): Phosphates in solution

(A): Phosphates in solution – (B): Decomposers

(A): Precipitates - (B): Rock and minerals

(A): Rock and minerals - (B): Precipitates



CH7- Population Ecology

Q 17 Page 182-183 **Figure 2**

1- What is the dispersion pattern of herding animals, birds that flock together, and fish that form schools?

- A- **Clumped** B- Uniform
C- random D- Unpredictable

2- The population density of the cattle egrets is greater near the cape buffalo. What the type of dispersion you would expect these birds to have?

- A- Clumped B- Uniform
C- **random** D- Unpredictable



3- American bison are found in groups called herds, What the type of dispersion of bison?

- A- **Clumped** B- Uniform
C- random D- Unpredictable

Mohamad Rajab



Q 18 Page 186 **Figure 6**

4- Which of the following example of a density-dependent factors :

- A- **disease** B- pollution C- drought D- flooding

5- which of the following is a density-dependent factors?

- A- **The competition** B- The drought
C- The flooding D- The hurricane

Mohamad Rajab

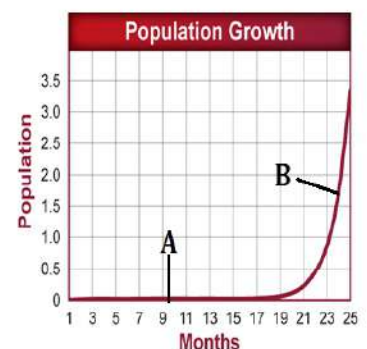
6- Which of the following depends on the number of members in a population per unit area?

- A- An abiotic factor B- **A density-dependent factor**
C- A density-independent factor D- A biotic factor

Q 14 Page 187 **Figure 7**

6- When a population growth is represented on a grid and results in a (J) shaped graph, it exhibits

- A- Logistic
B- **exponential**
C- Carrying capacity.
D- Lag phase.

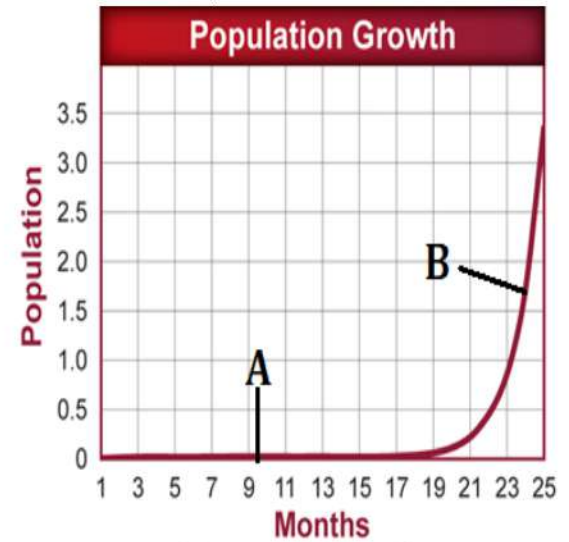


7- What does the letter (A) represent?

- A. exponential growth
- B. lag phase
- C. logistic growth
- D. straight-line growth

8- What does the letter (B) represent?

- A- exponential growth
- B- lag phase
- C- logistic growth
- D- straight-line growth



Q 15 Page 188

9- If angelfish produce hundreds of young several times a year, which statement below is true?

- A. angelfish have a k-strategy reproductive pattern.
- B. angelfish have an r-strategy reproductive pattern.
- C. angelfish probably have a low mortality rate.
- D. angelfish provide a lot of care for their young.



10- Which of the following organisms follows a r-strategy for reproduction?



(A)



(B)



(C)



(D)

11- One of the characteristics of organisms that adopt the rate strategy, or r-strategy:

- A. Short life span
- B. larger organism
- C. Produces few offspring
- D. Parental care

14- Which of the following organisms is an example of the rate strategy, or r-strategy?

- A. Zebra
- B. Robin
- C. May fly
- D. human.

12- Which strategy is considered an adaptation for living in an environment where fluctuation in biotic or abiotic factors occurs?

- A- k-strategy reproductive pattern.
- B- r-strategy reproductive pattern.
- C- a low mortality rate
- D- high mortality rate

18- Which of the following organisms is an example of a carrying-capacity strategy, or k-strategy?

- A. Zebra
- B. Locusts
- C. Fruit fly
- D. Mouse

Q 16 Page 189 Figure 10

13- One of the characteristics of organisms that adopt the K-strategy:

- A. Short life span
B. small organism
C. **Produces few offspring**
D. Less Parental care.

14- Which of the following organisms follows a K-strategy for reproduction?



a fruit fly ذبابة الفاكهة
(A)



Locusts الجراد
(B)



Mouses الفئران
(C)



Elephant الفيلة
(D)

15- Which of the following organisms is an example of a carrying-capacity strategy, or k-strategy?

- A. **the elephant**
B. Locusts
C. Fruit fly
D. Mouse

Population Growth Rate of Countries

$$(\%) \text{PGR} = \frac{\text{birthrate} - \text{death} + \text{migration rate}}{10}$$

16- In United States, The birthrate 14.1(per1000) death rate 8.3 (per1000) and migration rate 2.9 (per1000). How much Population Growth Rate?

- A- 0.11%
B- 2.02%
C- **0.87%**
D- 0.16%

17- Japan had a birthrate of eight and a death rate of nine in 2008. What was the PGR?

- A. 0.01 %
B. 1%
C. **-1%**
D. -10%

Mohamad Rajab

18- Georgia, a country in western Asia, had a birthrate of 11 and death rate of 10 in 2008. What was the PGR of Georgia in that year?

- A. 1%
B. **0.11 %**
C. 1.1 %
D. 11 %

19- China has birthrate 51.9 (per 1000). Death rate 3.3 (per1000), and migration rate 2.3 (per 1000).

What is the population growth rate?

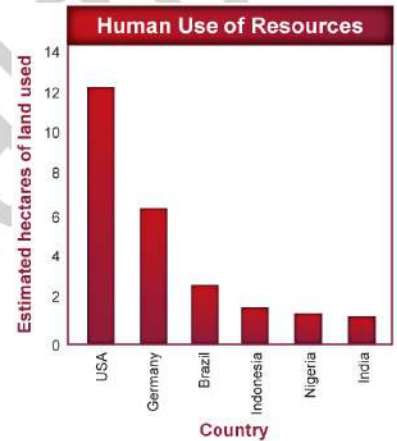
- A- **5.09%**
B- 3.12%
C- 4.05%
D- 1.02%

20- Which of the following does **NOT** help in **decreasing** the carrying capacity of the earth?

- A- The development of technology
- B- decreasing the amount of resources used by each person.
- C- **increasing the amount of resources used by each person.**
- D- voluntary population control.

21- Based on the information in the graph, infer which statement accurately represents the information provided

- A- India has very little land for farming.
- B- Germany is smaller per acre than the United States.
- C- **More land is used to support an individual in the United States.**
- D- A person in Indonesia requires more land than a person in Brazil.

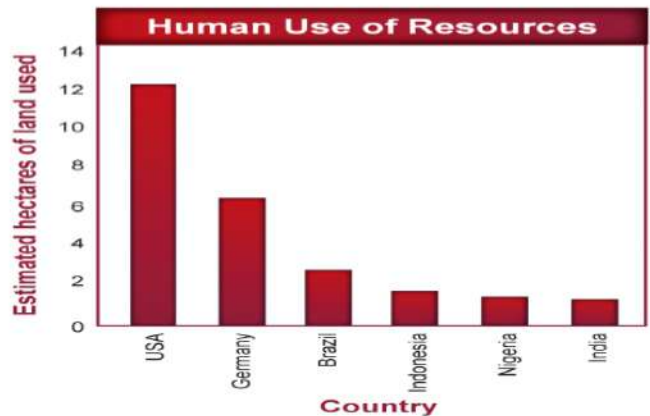


22- Which Country is the least amount of land used to support an individual?

- A- USA
- B- Indonesia
- C- Brazil
- D- **India**

23- Based on the information in the graph, infer which statement accurately represents the information provided:

- A- **Individuals in industrially developed countries use greater amounts of resources.**
- B- Individuals in developing countries use greater amounts of resources.
- C- Brazil is one of the largest resource users.
- D- Indonesia is the least resource users.



Mohamad Rajab

24- If a population grows larger than its environmental carrying capacity. Then

- a- Birth rate may rise
- b- **Death rate may rise**
- c- immigration rate may increase
- c- death rate may increase

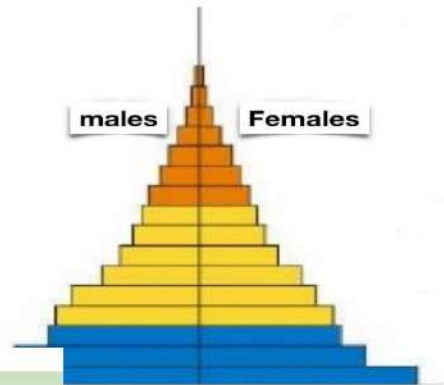
Bonus Question

1- In the age structure chart, which of the following represents the Reproductive stage?

- A- before age 10
- B- between ages 10 and 20
- C- **between ages 20 and 44**
- D- after age 44.

2- In the age structure chart, which of the following represents the post-reproductive?

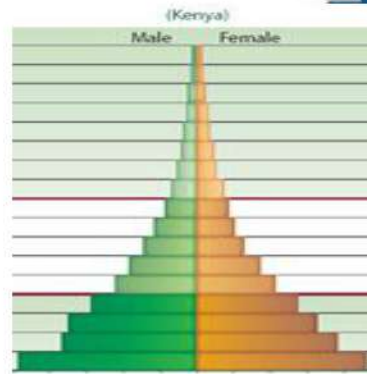
- A- before age 20
- B- **after age 44**
- C- between ages 20 and 44
- D- after age 60.



3- What kind of age structure for Kenya?

- A- Negative Growth
- B- Slow Growth
- C- **Rapid Growth**
- D- Zero population growth

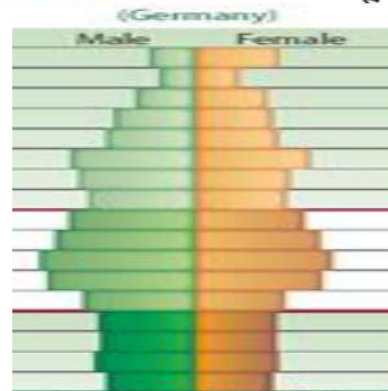
Mohamad Rajab



Mohamad Rajab

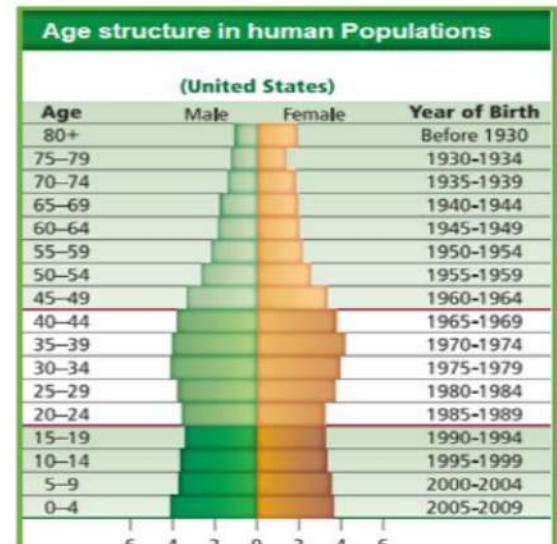
4- What kind of age structure for Germany?

- A- **Negative Growth**
- B- Slow Growth
- C- Rapid Growth
- D- Zero population growth



5- Which of the following is a characteristic of the age structure shown below?

- A- Negative Growth
- B- **Slow Growth**
- C- Rapid Growth
- D- Zero population growth



6- What will happen to the human population when the birthrate equals the death rate?

- A- CDC
- B- HPG
- C- PGR
- D- **ZPG**

Mohamad Rajab

Mohamad

7- In any country has the lowest population growth rate?

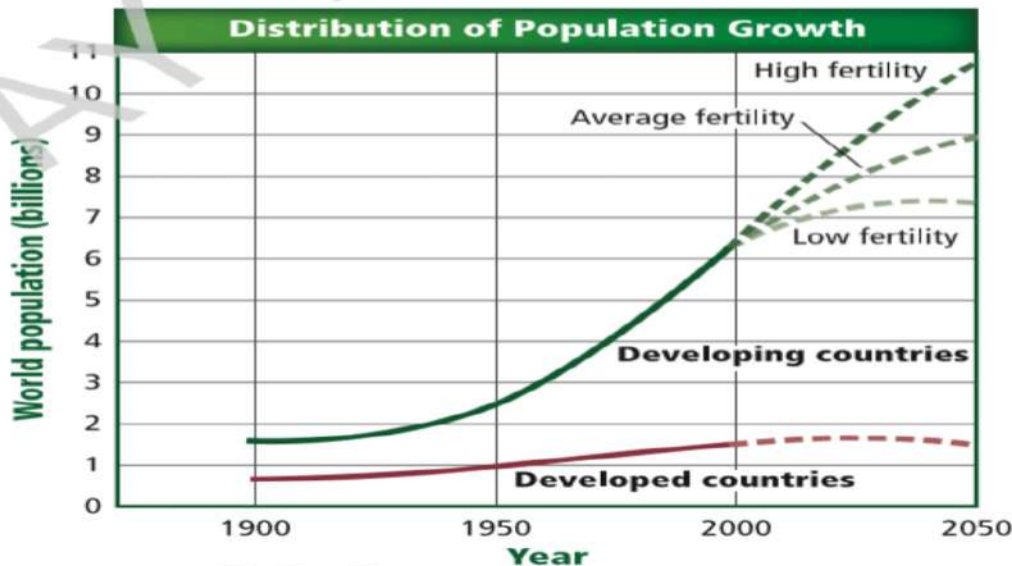
- A- United States B- **Bulgaria**
C- Germany D- Brazil

8- Which of the following countries will be one the fastest growing countries in the next years?

- A- United States B- Indonesia
C- Afghanistan D- **Niger**

Country	Population growth rate (percent)
Indonesia	1.18
Afghanistan	2.63
Bulgaria	-0.81
Niger	2.88
United States	0.88
Germany	-0.04

Use the graph below of the growth of the human population through history to answer question 9 and 10.



9- What is the projected population of developing countries by 2050 when the fertility is low?

- A- 1.5 billion B- **7.3 billion**
C- 9 billion D- 10.5 billion

10- What is the projected population of developed countries by 2050?

- A- **1.5 billion** B- 7.3 billion
C- 9 billion D- 10.5 billion

11- What is the approximate population difference between developing countries that have low fertility rates and developing countries that high fertility rates in 2050?

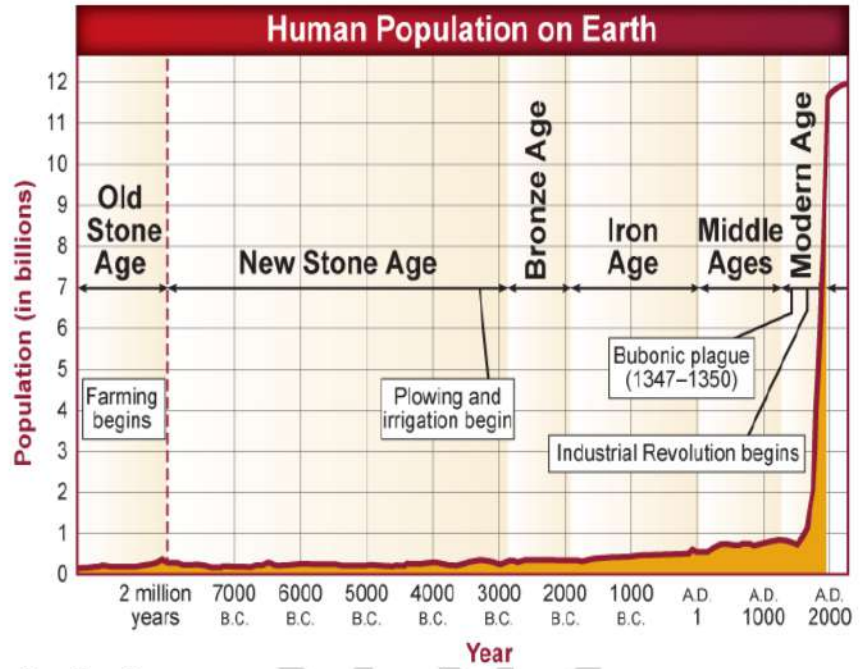
- A- 1.5 billion B- 1.7 billion
C- **3.2 billion** D- 9 billion

12- Which type of human population growth model does this graph represent?

- A. exponential
- B. spatial
- C. genetic
- D. logistic

13- When did the human population begin to increase exponentially?

- A- 2 million years ago.
- B- 1800 B.C.E.
- C- 6500 B.C.E.
- D- 1500 C.E.



14- Humans will reach zero population growth when?

- A- Carrying capacity is reached.
- B- humans stop giving birth.
- C- world population stops growing.
- D- birthrate equals death rate.