

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



كلية العلوم

القسم : علم الحياة

السنة : الرابعة

اسئلة ورشات محلولة

بيولوجيا نباتية

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كلية العلوم (فيزياء ، كيمياء ، رياضيات ، علم الحياة)

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

120 marks/

- / 20 marks/

- a. Monocots b. Veins
c. Dicots d. Angiosperm\

3. It is able to provide greater protection to the inner layers of the plant than the epidermis, but it's a less active tissue which doesn't really grow, though it still allows for limited gas exchange .

- a. The Periderm b. The Stomata
- c. The Sieve Cells d. The Guard Cells.

4. Located at the bottom of the pistil. It is where the ovules or "eggs" of a plant are.

- a. The Ovary b. The Pistil
- c. The Anthers d. The Stigma

5. They're referred to as plant-like protists

- a. Ferns b. Diatoms
- c. Epiphytes d. Bryophytes

The fourth question: Determine if the following statements are true or false / 20 marks/

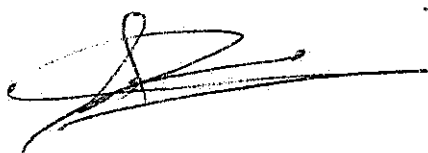
1. Most plants are hermaphroditic, meaning they contain both male and female reproductive organs.
2. The shoot system includes only the reproductive parts of the plant.
3. The study of plants is important in environment protection.
4. Anthocyanin pigments are usually found in the petals of flowers and in the flesh of fruits, red autumn leaves, but they can also color the stems of plants.
5. Angiosperms are kind of true seed-bearing plants called spermatophytes. Angiosperms means "naked seeds"
6. Potatoes store their starch in underground organs called rhizomes.
7. Gymnosperms include the plants known as: Conifers, Cycads, and Ginkgo Trees.
8. Nonvascular plants are much older on the evolutionary timeline than vascular plants, since their structures and reproduction are much less complicated.
9. The major groups of monocots are: Orchids, grains, bamboos, palms, lilies, and grasses.
10. Some examples of physical plant defenses are spines or thorns like on honey locust trees or cacti.

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

Wishing you the best of luck

5/2/2025

Lecturer: Dr. Maissoun Ziadeh



The first question: Answer two of the following three questions (No more than four lines per question) / 20 marks/

1- How many types of plant cells are there? List them and talk about one of them.

1. meristematic cells
2. parenchyma cells
3. Collenchyma cells
4. sclerenchyma cells

ادرجة لكل نوع وست درجات لشرح نوع من الخلايا.

2- Compare between Bryophytes and Lycophytes (Have they vascular system?, where do they live?, What s the dominant generation?)

	Bryophytes	Lycophytes
Vascular system	don't have a vascular system	They are vascular plants
They live	in cool, moist places, OR on tree bark in dense forests or on rocks next to streams	grow close to the ground in the forest understory, or as epiphytes,
The dominant generation	The haploid gametophyte	The diploid sporophyte

3- In primary growth, plant is building more cells to make it taller or longer.

So primary growth makes the grass grow higher, it makes trees grow taller, it makes roots grow deeper, and it makes vines grow longer.

In secondary growth, the plant gets broader or thicker due to the lateral or sideways activity of meristem cells.

When lateral meristem cells divide, they create more girth for the plant, so the stem increases in diameter / 5 درجات لكل نوع من أنواع النمو في النبات /

The second question: What is the scientific term that matches the following definitions?

/ 20 marks/

1. Botany, phytology, Plant Biology /4 درجة/
2. The Cuticle /4 درجة/
3. Mycorrhizae /4 درجة/
4. Pigments /4 درجة/
5. Positive hydrotropism /4 درجة/

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

- Handwritten: a. dendrochronology*
1. Botany, phytology, Plant Biology /4 درجة/
 2. a. Monocots /4 درجة/
 3. a. The Periderm. /4 درجة/
 4. a. The Ovary. /4 درجة/
 5. b. Diatoms /4 درجة/

d. The fourth question: Determine if the following statements are true or false / 20 marks/

Handwritten: 2/ درجة لكلمة صح أو خطأ في موقعها المناسب/

- | | | |
|---------|----------|----------|
| 1. True | 2. False | 3. True |
| 4. True | 5. False | 6. False |
| 7. True | 8. True | 9. True |
| | | 10. True |

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

Handwritten: 4 درجات لطرح سؤال منطقي، و 16 درجة لمناقشته.

Lecturer: Dr. Maissoun Ziadeh

The first question: Answer two of the following three questions (No more than four lines) / 20 marks/

- 1- Compare between plant Morphology and Plant Physiology.
- 2- Compare between Bryophytes and Lycophytes (Have they vascular system?, where do they live?, What is the dominant generation?)
- 3- What are the types of Plant Tropisms and Plant Defenses?

The second question: What is the scientific term that matches the following definitions? / 20 marks/

1. is the branch of Biology that deals with the study of plants.
2. can divide and replicate, and they can produce daughter cells belonging to any other kind of plant cell.
3. makes the grass grow higher, it makes trees grow taller; it makes roots grow deeper, and it makes vines grow longer
4. are organic compounds that give living things their color and may also serve some other sort of function.
5. Most of these cells don't have chloroplasts or other specialized organelles. They're primarily there just to serve as a protective layer to shield the more important tissues beneath.

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

1. Determination of age of the trees by counting annual rings.
a. Dendrochronology b. Palynology
c. Morphology d. Embryology
- 2- Their embryo has a single cotyledon, and their The petals are generally arranged in multiples of three
a. Monocots b. Veins
c. Dicots d. Angiosperm
3. Curved cells appear in pairs on either side of a stoma and work together to open or close the stoma as needed by the plant.
a. The Periderm b. The Stomata
c. The Sieve Cells d. The Guard Cells.

4. Located at the bottom of the pistil. It is where the ovules or "eggs" of a plant are.

- a. The Ovary
- b. The Pistil
- c. The Anthers
- d. The Stigma

5. They're referred to as plant-like protists

- a. Ferns
- b. Diatoms
- c. Epiphytes
- d. Bryophytes

The fourth question: Determine if the following statements are true or false / 20 marks/

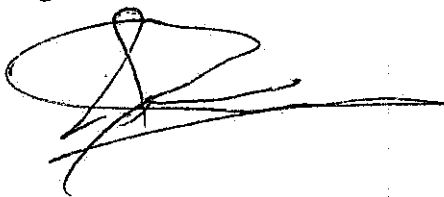
1. Most plants are hermaphroditic, meaning they contain both male and female reproductive organs.
2. The shoot system includes the vegetative or structural parts of the plant, and also the reproductive parts of the plant.
3. The study of plants is important in environment protection.
4. Anthocyanin pigments are usually found in the petals of flowers and in the flesh of fruits, red autumn leaves, but they can also color the stems of plants.
5. "Angiosperms" means "flowering plants".
6. Potatoes store their starch in underground organs called rhizomes.
7. Gymnosperms include the plants known as: Conifers, Cycads, and Ginkgo Trees.
8. Nonvascular plants are much older on the evolutionary timeline than vascular plants, since their structures and reproduction are much less complicated.
9. The major groups of monocots are: Orchids, grains, bamboos, palms, lilies, and grasses.
10. The clade magnoliidae makes up to 72% of all known flowering plants.

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

Wishing you the best of luck

31/7/2024

Lecturer: Engr. Maissoun Ziadeh



The first question: Answer two of the following three questions (No more than four lines) / اختيار سؤالين من الثلاثة / 10 درجات لكل سؤال

1- Plant Morphology: It deals with the study and description of different organs of plant. /
/لتعريف المورفولوجيا 4 درجة

Morphology is divided into two parts.

External Morphology / 1 درجة and Internal Morphology / 1 درجة

Plant Physiology : This branch deals with the study of different vital activities of plants like absorption of water and minerals, photosynthesis, respiration, nitrogen metabolism, growth etc.

/لتعريف الفيزيولوجيا 4 درجة /

2- Compare between Bryophytes and Lycophytes (Have they vascular system?, where do they live?, What s the dominant generation?)

	Bryophytes	Lycophytes
Vascular system	don't have a vascular system 1	They are 1 vascular plants
They live	in cool, moist places, OR 2 on tree bark in dense forests or on rocks next to streams	grow close to the ground in the 2 forest understory, or as epiphytes,
The dominant generation	The haploid gametophyte 2	The diploid sporophyte 2

3-

Plant Tropisms

1.Phototropism - 2.Gravitropism, Geotropism- 3.Hydrotropism - 4.Thigmotropism - 5.Chemotropism - 6.Thermotropism.

/درجة لكل نوع من الانجذابات/

Plant Defenses

1- plant Physical defenses / 1 درجة

spines or thorns like on honey locust trees or cacti.

tough outer coating such as bark or a waxy substance

leaves have tiny hairs on them.

high silica content in leaves. /ذكر أي مثال درجة/

2- Plant chemical defenses /1درجة/

poison ivy and wild parsnip.

chemical compounds that mimic insect growth hormones. /ذكر أي مثال درجة/

The second question: What is the scientific term that matches the following definitions? / 20 marks/

1. Botany, phytology, Plant Biology /4درجة/

2. Meristematic cells /4درجة/

3. Primary growth /4درجة/

4. Pigments /4درجة/

5. The epidermis /4درجة/

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

1- a. Dendrochronology /4درجة/

2. a. Monocots /4درجة/

3. d. The Guard Cells /4درجة/

4. a. The ovary /4درجة/

5. b. Diatoms /4درجة/

The fourth question: Determine if the following statements are true or false / 20 marks/ /2درجة لكل كلمة صح أو خطأ في موقعها المناسب/

1. True. 2. True. 3. True. 4. True. 5. True.

6. False. 7. True. 8. True. 9. True. 10. False

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

4 درجات لطرح سؤال منطقي، و16 درجة لمناقشته.

Lecturer: Engr. Maissoun Ziadeh

The first question: Answer two of the following three questions (No more than four lines) / 20 marks/

- 1- Compare between plant Morphology and Plant Physiology.
- 2- Compare between primary growth and secondary growth.
- 3- Compare between Meristematic cells and Sclerenchyma cells.

The second question: What is the scientific term that matches the following definitions? / 20 marks/

- 1-..... Most of these cells don't have chloroplasts or other specialized organelles. They're primarily there just to serve as a protective layer to shield the more important tissues beneath.
- 2-..... is a waxy substance, that prevents excess water from escaping the plant and also protects the plant from invasion by pathogens
- 3-..... sometimes referred to as "vegetable sulfur" has also been used in fireworks and magic tricks.
- 4-..... causes plant roots to grow towards saturated soil in order to collect water for the plant,
- 5-..... do the main work of providing nutrients to the plant through the process of photosynthesis

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

- 1- They are organic compounds that give living things their color and may also serve some other sort of function.

1. Chlorophyll 2. Carotenoids
3. Flavonoids 4- All previous answers (a,b,c) are true.

- 2- Their embryo has a single cotyledon, and their The petals are generally arranged in multiples of three

- a. Monocots b. Veins
- c. Dicots d. Angiosperm

3. A plant also needs some openings in the epidermis in order to let water and gases travel in and out. These openings are called

- a. The Periderm b. The Stomata
- c. The Sieve Cells d. The Guard Cells

The first question: Answer two of the following three questions (No more than four lines) / اختيار سؤالين من الثلاثة / 10 درجات لكل سؤال

1- **Plant Morphology:** It deals with the study and description of different organs of plant. /
التعريف المورفولوجيا 4 درجة

Morphology is divided into two parts.

External Morphology / 1 درجة and Internal Morphology / 1 درجة

Plant Physiology : This branch deals with the study of different vital activities of plants like absorption of water and minerals, photosynthesis, respiration, nitrogen metabolism, growth etc.

/التعريف الفيزيولوجيا 4 درجة /

2- In **primary growth**, plant is building more cells to make it taller or longer.

So primary growth makes the grass grow higher, it makes trees grow taller, it makes roots grow deeper, and it makes vines grow longer.

In **secondary growth**, the plant gets broader or thicker due to the lateral or sideways activity of meristem cells.

When lateral meristem cells divide, they create more girth for the plant, so the stem increases in diameter / 5 درجات لكل نوع من أنواع النمو في النبات

3- Meristematic cells:

Meristematic cells are undifferentiated.

when meristematic cells divide and replicate, they can produce daughter cells belonging to any other kind of plant cell.

Meristematic cells can be found in the tips of the roots, and in the tips of the shoots.

Meristematic cells don't get used up. (أي فكرتين صحيحتين من الأربعة = خمس درجات)

sclerenchyma cells

sclerenchyma cells are dead.

sclerenchyma cells provide the most support for the plant.

Sclerenchyma cell walls contain lots of cellulose and lignin.

There are two groups of sclerenchyma cells : the Fibers, the sclereids

(أي فكرتين صحيحتين من الأربعة = خمس درجات)

The second question: What is the scientific term that matches the following definitions? / 20 marks/

- 1 The epidermis / 4 درجة
2. The Cuticle / 4 درجة
3. club moss spores or "lycopodium powder" / 4 درجة
4. Positive hydrotropism / 4 درجة
5. leaves. / 4 درجة

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

- 1- d- All previous answers (a,b,c) are true.

4/ درجة ، وذكر واحد من الاحتمالات (a,b,c) يحصل على درجتين فقط.

- 2- a. Monocots / 4 درجة
3. b. The Stomata / 4 درجة
4. b. Mycorrhizae / 4 درجة
5. c. Phototropism / 4 درجة

d. The fourth question: Determine if the following statements are true or false / 20 marks/

2/ درجة لكلمة صح أو خطأ في موقعها المناسب/

- | | | | |
|----------|----------|---------|-----------|
| 1. True | 2. False | 3. True | |
| 4. false | 5. False | 6. True | |
| 7. True | 8. False | 9. True | 10. False |

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

4 درجات لطرح سؤال منطقي، و16 درجة لمناقشته.

Lecturer: Engr. Maissoun Ziadeh

The first question: Answer two of the following three questions (No more than four lines)

اختيار سؤالين من الثلاثة / 10 درجات لكل سؤال/

1- In primary growth, plant is building more cells to make it taller or longer.

So primary growth makes the grass grow higher, it makes trees grow taller, it makes roots grow deeper, and it makes vines grow longer.

In secondary growth, the plant gets broader or thicker due to the lateral or sideways activity of meristem cells.

When lateral meristem cells divide, they create more girth for the plant, so the stem increases in diameter.

5/ درجات لكل نوع من أنواع النمو في النبات /

2-

	The xylem / 1/ درجة	The phloem / 1/ درجة
the cells	dead cells called tracheids and vessel elements / 2/ درجة .	living cells called companion cells and sieve cells. / 2/ درجة
their function	responsible for transporting water and mineral nutrients upwards. / 2/ درجة	responsible for transporting the sugars produced through photosynthesis in the leaves to all of the other parts of the plant / 2/ درجة .

3- The major groups of monocots: / 2/ درجة لكل مجموعة

1.Orchids.

2.Other major groups of monocots include the bamboos, palms, lilies, and grasses.

3. All major grains, like rice, wheat, maize, barley, millet, and oats are monocots.
4. Forage grasses, which are used as feed for cattle, along with sugarcane, bananas, ginger, pineapples, leeks, onions, and garlic.
5. Bulb plants cultivated for their blooms, like bluebells and tulips.

The second question: What is the scientific term that matches the following definitions? / 20 marks/

1. Botany, phytology, Plant Biology /4 درجة/
2. The Cuticle /4 درجة/
3. Leaves /4 درجة/
4. Ethylene /4 درجة/
5. Pollination /4 درجة/

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

1. Determination of age of the trees by counting annual rings.
 - a. Dendrochronology /4 درجة/
2. have thickened cell walls like the collenchyma, the real difference is these cells are dead and found in parts of the plant that are no longer growing.
 - d. Sclerenchyma Cells /4 درجة/
3. curved cells appear in pairs on either side of a stoma and work together to open or close the stoma as needed by the plant.
 - b. d. The Guard Cells /4 درجة/
4. They are the oldest living type of vascular plant.
 - b. Lycophytes /4 درجة/
5. When light receptors in a plant's cells sense light in a certain direction, they trigger the hormone auxin to elongate the cells on the dark side of the plant such that it bends towards the light.
 - c. Phototropism /4 درجة/

The fourth question: Determine if the following statements are true or false / 20 marks/

2/ درجة لكل كلمة صح أو خطأ في موقعها المناسب/

- | | | | |
|---------|----------|----------|-----------|
| 1. True | 2. False | 3. False | |
| 4. True | 5. False | 6. True | |
| 7. True | 8. False | 9. True | 10. False |

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

4 درجات لطرح سؤال منطقي، و16 درجة لمناقشته.

Lecturer: Engr. Maissoun Ziadeh

Question 1: Answer two of the following three questions (in no more than four lines).

/ 20 marks/

- 1- The flower contains the plant's reproductive organs. List the parts of the male and the female reproductive organs.
- 2- Vascular tissues can be broken down into two types. What are they? Compare between them (the cells they are made up of, their function).
- 3- What are the types of seed dispersal?

Question 2: What is the scientific term that matches the following definitions?

/ 20 marks/

1. This branch deals with all aspects related to genes such as their structure, synthesis, inheritance, mutations, etc.
2. Most of these cells don't have chloroplasts or other specialized organelles. They're primarily there just to serve as a protective layer to shield the more important tissues beneath.
3. The most important plant growth hormone. It is responsible for most of the primary growth in a plant, including the lengthening and differentiation of cells from the meristem.
4. are organic compounds that give living things their color and may also serve some other sort of function.
5. they lack the xylem and phloem vascular tissues.

Question 3: Choose the most accurate answer among the four suggested options.

/ 20 marks/

1. The study and description of different organs of plant:
 - a. Embryology
 - b. Palynology
 - c. Morphology
 - d. Dendrochronology
2. They are living cells that have thickened cell walls. When they exist in a part of a plant, they make it stiffer.
 - a. Parenchyma cells
 - b. Meristematic cells
 - c. Collenchyma cells
 - d. Sclerenchyma cells

3. A plant also needs some openings in the epidermis in order to let water and gases travel in and out. These openings are called

- a. The Periderm b. The Stomata
- c. The Sieve Cells d. The Guard Cells

4. Located at the bottom of the pistil. It is where the ovules or "eggs" of a plant are.

- a. The Ovary b. The Pistil
- c. The Anthers d. The Stigma

5. Gymnosperms include the plants known as:

- a. Conifers b. Cycads
- c. Ginkgo Trees d. All previous answers (a,b,c) are true.

Question 4: Determine whether the following statements are true or false / 20 marks/

1. Botany is important in the area of economic productivity because it is involved in the study of crops and ideal growing techniques.
2. In primary growth, the plant gets broader or thicker due to the lateral or sideways activity of meristem cells.
3. Anthocyanin pigments are usually found in the petals of flowers and in the flesh of fruits, red autumn leaves, but they can also color the stems of plants.
4. With Lycophytes, the diploid sporophyte is the dominant generation, or the generation that we're most aware of, rather than the haploid gametophyte.
5. Angiosperms are kind of true seed-bearing plants called spermatophytes. Angiosperms means "naked seeds".
6. Potatoes store their starch in underground organs called rhizomes.
7. The largest family of monocots are the orchids, which account for about 20,000 to 28,000 accepted species.
8. The eudicots make up about 5% of all flowering plants.
9. Some examples of physical plant defenses are spines or thorns like on honey locust trees or cacti.
10. Cyanobacteria don't qualify as plants at all, because they're unicellular prokaryotes, where plants are multicellular eukaryotes.

Question 5: Choose a scientific topic discussed in the course. Write down the question and its answer. (in no more than five lines) / 20 marks/

Wishing you the best of luck.

Lecturer: Engr. Maissoun Ziadeh

9/8/2023



The first question: Answer two of the following three questions (No more than four lines)

اختيار سؤالين من الثلاثة /10 درجات لكل سؤال/

1- The male reproductive organs, is called the stamens, /2 درجة/
include the anthers /1 درجة/, thin filaments /1 درجة/, and the pollen /1 درجة/.

The female reproductive organs, is called the pistil /2 درجة/
include the stigma /1 درجة/, the style /1 درجة/, the ovary /1 درجة/.

2-

	The xylem /1 درجة/	The phloem /1 درجة/
the cells	dead cells called tracheids and vessel elements /2 درجة/.	living cells called companion cells and sieve cells. /2 درجة/
their function	responsible for transporting water and mineral nutrients upwards. /2 درجة/	responsible for transporting the sugars produced through photosynthesis in the leaves to all of the other parts of the plant. /2 درجة/

3- 1.For instance, bright red berries will attract the attention of birds, who will then ingest the berries and carry the seeds for miles before depositing them with their fecal material.

2.Other angiosperm pericarps become tough nuts that squirrels will bury in the ground.

3.Some angiosperm fruits even grow with lots of hooks on the outside, like this burdock, which can hitch a ride on the fur of passing animals.

يكفي طريقتين من طرق انتشار البذور، كل طريقة خمس درجات.

The second question: What is the scientific term that matches the following definitions?
/ 20 marks/

1. Genetics /4 درجة/

2. The epidermis /4 درجة/

3. Auxin /4 درجة/

4. Pigments /4 درجة/

ذكرهم أنواع الدُ صبغة يا حذ / 4 درجة /

5. Nonvascular plants /4 درجة/

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

1. It deals with the study and description of different organs of plant:

c. Morphology /4 درجة/

2. They are long live cells that have thickened cell walls, meaning that when they're in a group they act to make that part of the plant stiffer.

c. Collenchyma cells /4 درجة/

3. A plant also needs some openings in the epidermis in order to let water and gases travel in and out, These openings are called

b. The stomata /4 درجة/

4. At The bottom of the pistil, and this is where the ovules or "eggs" of a plant are.

a. The ovary /4 درجة/

5. Gymnosperms include the plants known as

d. All previous answers (a,b,c) are true. /4 درجة/

ذكرهم الحيات السابقة ا, b, c
بأحد 2 درجة /

The fourth question: Determine if the following statements are true or false / 20 marks/

2/درجة لكلمة صح أو خطأ في موقعها المناسب/

1. True

2. False

3. True

4. True

5. False

6. False

7. True

8. False

9. True

10. True

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

4 درجات لطرح سؤال منطقي، و16 درجة لمناقشته.

Lecturer: Engr. Maissoun Ziadeh



The first question: Answer two of the following three questions (No more than four lines)

- 1- List the types of plant pigments and talk about one of them.
- 2- What are the kinds of seed dispersal?
- 3- Compare between monocots and dicots, (number of embryonic leaves /cotyledons/, roots, flowers, leaves, distribution of vascular tissues).

The second question: What is the scientific term that matches the following definitions?
/ 20 marks/

1. This branch of botany that deals with all aspects related to genes such as their structure, synthesis, inheritance, mutations etc.
2. Angiosperms are kind of true seed-bearing plants, and they are also known as:
3. sometimes referred to as "vegetable sulfur" has also been used in fireworks and magic tricks.
4. causes plant roots to grow towards saturated soil in order to collect water for the plant,
5. do the main work of providing nutrients to the plant through the process of photosynthesis.

The third question: Choose the most accurate answer among the four suggested options
/ 20 marks/

1. It deals with the study and description of different organs of plant:
 - a. Embryology
 - b. Palynology
 - c. Morphology
 - d. Dendrochronology
2. When they divide and replicate, they can produce daughter cells belonging to any other kind of plant cell:
 - a. Parenchyma cells
 - b. Meristematic cells
 - c. Collenchyma cells
 - d. Sclerenchyma cells
3. cover the flower and protect it when it's still a bud before it blooms
 - a. The petals
 - b. The Pistil
 - c. The Anthers
 - d. The Stigma

4. The fungi living in pockets on roots, and they form symbiotic relationships with plants, providing mineral nutrients to the plant in exchange for sugars from photosynthesis.

- a. Rhizobium
- b. Mycorrhizae
- c. Prokaryotes
- d. Eukaryotes

5. is the process of moving pollen from the male cones to the female cones for fertilization.

- a. Respiration
- b. chemical defenses
- c. Physical defenses
- d. Pollination

The fourth question: Determine if the following statements are true or false / 20 marks/

1. Parenchyma cells provide the most support for the plant by creating woody tissue in stems and trunks.

2. Most plants are hermaphroditic, meaning they contain only female reproductive organs.

3. Auxin is responsible for most of the primary growth in a plant, including the lengthening and differentiation of cells from the meristem.

4. Vascular plants are usually small and relatively simple in their structure, This is because they lack the xylem and phloem.

5. The largest family of monocots, by far, are the orchids.

6. The shoot system includes the vegetative or structural parts of the plant, and also the reproductive parts of the plant.

7. The majority of the biomass produced in agriculture comes from the monocots. This is because all major grains, like rice, wheat, maize, barley, millet, and oats are monocots.

8. Negative hydrotropism causes plant roots to grow towards saturated soil in order to collect water for the plant, while positive hydrotropism causes roots to grow into drier soils.

9. Some plants have high silica content in their leaves which will attract insects.

10. When parts of a plant encounter a solid object, they demonstrate Thermotropism or growth in response to physical touch.

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

Wishing you the best of luck

Lecturer: Engr. Maissoun Ziadeh



2023/5/15

The first question: Answer two of the following three questions (No more than four lines)

1- List the types of plant pigments and talk about one of them.

1.chlorophyll

2.carotenoids

3.flavonoids

4.Phytochrome

درجة لكل نوع وست درجات لشرح نوع من الصبغات.

2- What are the kinds of seed dispersal?

1.For instance, bright red berries will attract the attention of birds, who will then ingest the berries and carry the seeds for miles before depositing them with their fecal material.

2.Other angiosperm pericarps become tough nuts that squirrels will bury in the ground.

3.Some angiosperm fruits even grow with lots of hooks on the outside, like this burdock, which can hitch a ride on the fur of passing animals.

يكفي طريقتين من طرق انتشار البذور، كل طريقة خمس درجات.

3- Compare between monocots and dicots, (number of embryonic leaves /cotyledons/, roots, flowers, leaves, distribution of vascular tissues).

	monocots	dicots
cotyledons	embryo has a single cotyledon	has two cotyledons
roots	fibrous system	large vertical taproot
flowers	The petals are generally arranged in multiples of three.	The petals are generally arranged in multiples of <u>fours or fives</u> .
leaves	parallel veins	branched veins
distribution of vascular tissues	arranged in a complex array of tiny bundles throughout the stem	vascular bundles arranged in a ring.

درجة لكل فقرة بالجدول.

The second question: What is the scientific term that matches the following definitions? / 20 marks/

1. Genetics
2. Flowering Plants
3. club moss spores or "lycopodium powder"
4. Positive hydrotropism
5. leaves.

أربع درجات لكل إجابة صحيحة.

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

1. c. Morphology
2. b. Meristematic cells
3. a. The petals
4. b. Mycorrhizae
5. d. Pollination

أربع درجات لكل إجابة صحيحة.

The fourth question: Determine if the following statements are true or false / 20 marks/

2/درجة لكل كلمة صح أو خطأ في موقعها المناسب/

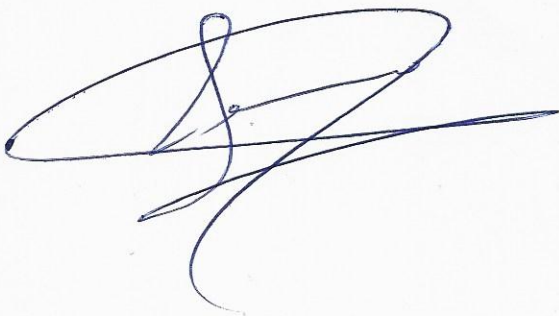
1. **false** Parenchyma cells provide the most support for the plant by creating woody tissue in stems and trunks.
2. **false** Most plants are hermaphroditic, meaning they contain only female reproductive organs.
3. **true** Auxin is responsible for most of the primary growth in a plant, including the lengthening and differentiation of cells from the meristem.

4. **false** Vascular plants are usually small and relatively simple in their structure, This is because they lack the xylem and phloem.
5. **true** The largest family of monocots, by far, are the orchids,
6. **true** The shoot system includes the vegetative or structural parts of the plant, and also the reproductive parts of the plant.
7. **true** The majority of the biomass produced in agriculture comes from the monocots. This is because all major grains, like rice, wheat, maize, barley, millet, and oats are monocots.
8. **false** Negative hydrotropism causes plant roots to grow towards saturated soil in order to collect water for the plant, while positive hydrotropism causes roots to grow into drier soils.
9. **false** Some plants have high silica content in their leaves which will attract insects.
10. **false** When parts of a plant encounter a solid object, they demonstrate Thermotropism or growth in response to physical touch.

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

4 درجات لطرح سؤال منطقي، و16 درجة لمناقشته.

Engr. Maissoun Ziadeh



The first question: Answer two of the following three questions (No more than four lines per question) / 20 marks/

- 1- How many types of plant cells are there? List them and talk about one of them.
- 2- List the types of plant hormones and talk about one of them.
- 3- Compare between monocots and dicots, (number of embryonic leaves /cotyledons/, roots, flowers, leaves, distribution of vascular tissues).

The second question: What is the scientific term that matches the following definition? / 20 marks/

1. is the branch of Biology that deals with the study of plants.
2. A branch of science that deals with the identification, nomenclature and classification of plants into related groups.
3. is the vascular tissue responsible for transporting water and mineral nutrients upwards.
4. The fungi living in pockets on roots, and they form symbiotic relationships with plants, providing mineral nutrients to the plant in exchange for sugars from photosynthesis.
5. is the process of moving pollen from the male cones to the female cones for fertilization.

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

1. The study of reciprocal relationship between the plants and the environment in which they are living, is:
 - a. Palaeobotany
 - b. Phycology
 - c. Plant Ecology
 - d. Dendrochronology
2. It's responsible for the photosynthetic layer in leaves, called the mesophyll, and also responsible for how a plant stores excess energy in the form of starches:
 - a. Parenchyma tissues
 - b. Sclerenchyma tissues
 - c. Dermal tissues
 - d. Vascular tissues
3. Where pollen is stored:
 - a. The petals
 - b. The Pistil
 - c. The Anthers
 - d. The Stigma

4. Cyanobacteria don't qualify as plants at all, and referred to as plant-like, because they're:

- a. Unicellular
- b. Multicellular
- c. Prokaryotes
- d. Eukaryotes

5. Angiosperms are kind of true seed-bearing plants, and they are also known as:

- a. Living Fossils
- b. Flowering Plants
- c. Gametophytes
- d. Naked Seeds

The fourth question: Determine if the following statements are true or false / 20 marks/


1. Most epidermal tissues secrete a waxy substance called cuticle.
2. Most plants are hermaphroditic, meaning they contain only female reproductive organs.
3. Leaves do the main work of providing nutrients to the plant through the process of photosynthesis.
4. Chlorophyll pigments reflect yellow light, which makes plants look green, and they absorb red, green, and blue light.
5. Lycopodium powder, sometimes referred to as "vegetable sulfur" has been used in fireworks and magic tricks because of its hydrophobic properties.
6. In ferns, the diploid sporophyte is the dominant generation, or the generation that we're most aware of seeing.
7. The majority of the biomass produced in agriculture comes from the monocots. This is because all major grains, like rice, wheat, maize, barley, millet, and oats are monocots.
8. Negative hydrotropism causes plant roots to grow towards saturated soil in order to collect water for the plant, while positive hydrotropism causes roots to grow into drier soils .
9. Some plants have high silica content in their leaves which will attract insects.
10. When parts of a plant encounter a solid object, they demonstrate Thermotropism or growth in response to physical touch.

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

Wednesday 3/8/2022

Wishing you the best of luck

Lecturer: Engr. Maissoun Ziadeh



The first question: Answer two of the following three questions (No more than four lines per question) / 20 marks/

1- How many types of plant cells are there? List them and talk about one of them.

1. meristematic cells
2. parenchyma cells
3. Collenchyma cells
4. sclerenchyma cells

درجة لكل نوع وست درجات لشرح نوع من الخلايا.

2- List the types of plant hormones and talk about one of them.

1. Auxin
2. cytokinin
3. The gibberellins
4. abscisic acid
5. Ethylene

درجة لكل نوع وخمس درجات لشرح نوع من الهرمونات.

3- Compare between monocots and dicots, (number of embryonic leaves /cotyledons/, roots, flowers, leaves, distribution of vascular tissues).

	monocots	dicots
cotyledons	embryo has a single cotyledon	has two cotyledons
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درجة لكل فقرة بالجدول.

The second question: What is the scientific term that matches the following definitions? / 20 marks/

1. Botany = Plant Biology /4درجة/ لأية إجابة صحيحة

2. Plant Taxonomy /4درجة/

3 Xylem /4درجة/

4. Mycorrhizae /4درجة/

5. Pollination /4درجة/

The third question: Choose the most accurate answer among the four suggested options / 20 marks/

1. The study of reciprocal relationship between the plants and the environment in which they are living, is:

c. Plant Ecology /4درجة/

2. It's responsible for the photosynthetic layer in leaves, called the mesophyll, and also responsible for how a plant stores excess energy in the form of starches:

a. Parenchyma tissues /4درجة/

3. Where pollen is stored:

c. The Anthers /4درجة/

4. Cyanobacteria don't qualify as plants at all, and referred to as plant-like, because they're:

a. Unicellular /4درجة/ لأية إجابة صحيحة

c. Prokaryotes

5. Angiosperms are kind of true seed-bearing plants, and they are also known as:

b. Flowering Plants /4درجة/

The fourth question: Determine if the following statements are true or false / 20 marks/ 2درجة لكل كلمة صح أو خطأ في موقعها المناسب/

1. **true**, Most epidermal tissues secrete a waxy substance called cuticle.

2. **false**, Most plants are hermaphroditic, meaning they contain only female reproductive organs.
3. **true**, Leaves do the main work of providing nutrients to the plant through the process of photosynthesis.
4. **false**, Chlorophyll pigments reflect yellow light, which makes plants look green, and they absorb red, green, and blue light.
5. **false**, Lycopodium powder, sometimes referred to as “vegetable sulfur” has also been used in fireworks and magic tricks because of its hydrophobic properties.
6. **true**, In ferns, the diploid sporophyte is the dominant generation, or the generation that we’re most aware of seeing.
7. **true**, The majority of the biomass produced in agriculture comes from the monocots. This is because all major grains, like rice, wheat, maize, barley, millet, and oats are monocots.
8. **false**, Negative hydrotropism causes plant roots to grow towards saturated soil in order to collect water for the plant, while positive hydrotropism causes roots to grow into drier soils .
9. **false**, Some plants have high silica content in their leaves which will attract insects.
10. **false**, When parts of a plant encounter a solid object, they demonstrate Thermotropism or growth in response to physical touch.

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

4 درجات لطرح سؤال منطقي، و16 درجة لمناقشته.

Engr. Maissoun Ziadeh



مكتبة
A to Z