

Tanta UNIVERSITY, Faculty of Science, Department of Botany				
EXAMINATION for freshmen (second Year) Students OF Chem./Micro				
Coursetitle:	Prokaryotic organisms		Course Code: MB2101	
Date: 3	Januay,2013	Term: First	Total assessment Marks: 150	Time allowed: 2 hours

Answer the following questions:-

Section 1

I - Choose the correct answer for each of the following: 22.5 Marks

- 1- The viruses are.....
a - saprophytic b - obligate parasitic c - facultative parasitic
d - symbiotic
- 2 - Which of the following methods are used for purification of viruses
a - salting out b - precipitation by alcohol c - ultracentrifugation
d - all
- 3 - Heterocyst present in.....
a - Oscillatoria b - Nostoc c - Viruses d - all
- 4 - Members of Cyanobacteria reproduce by
a - hormogonia b - akinetes c - endospores d - all
- 5 - False branching is characteristic of
a - Scytonema b - Gloeotrichia c - Nostoc d - Anabaena
- 6 - Scytonema usually reproduces by
a - hormogonia b - akinetes c - heterocysts d - endospores
- 7 - Mycophages infect
a - plants b - animals c - fungi d - algae
- 8 - Viruses multiply by
a - vegetative b - asexual c - sexual d - nothing
- 9 - The virus lose its infectivity by
a - ultra violet rays b - water c - alcohol d - ice
- 10- Plant viruses may be taken into animal cell by.....
a - insects b - plaque c - phagocytosis d - nothing

11-The extracellular infectious stage is called

a - virulence b - virion c - living organism d - nothing

12-Myxophyceae are called so because of their.....

a. Incipient nucleus b. Lack of plastids c. Mucilaginous sheath
d. Phycocyanin pigment

~~13~~ - The outer portion of the protoplast in a cyanophycean cell is called chromoplast because of the presence of.....

a. Coloured plasma membrane b. Chromosomes c. Pigment
d. Chromoplast

~~14~~ - The dominant pigment of blue green algae is.....

a. Phycoerythrin b. Xanthophyll c. Phycocyanin
d. Fucoxanthin

II - Complete the sentences with correct answer: - 20 Marks

1 - Virion consists of and

2 - Nucleotide consists of and

3 - Methods of viruses purification are and

4 - Virus host ranges are and

5 - The two purine bases are while the two pyrimidine bases are

6 - The ability of a virus to induce a tumor depends on

7 - *The development of malignant* of malignant tumors is called

8 - The cancer of white blood cells is called while the cancer of epithelial tissue is called

11-The extracellular infectious stage is called

- a - virulence b - virion c - living organism d - nothing

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ثانيا: أ.د. حسن القاضي

(10 درجات)

أولاً: ضع علامة صح أو خطأ

- 1- يزداد بخار الماء في طبقة الاستراتوسفير
- 2- التوازن بين عمليتي التنفس والبناء الضوئي يسبب خللاً في النظام البيئي
- 3- يصعد الهواء بسبب برودة الأرض ويكون السحب
- 4- النجيليات تقاوم الرعي بسبب الأشواك التي بها
- 5- ينشأ التنافس عندما تكون العوامل البيئية غير كافية
- 6- الأرباع هو عملية نقص النمو بالمعاملة الباردة
- 7- هناك علاقة طردية بين عجز التشبع وقوة التبخير
- 8- ترتفع درجة الحرارة في الأيونوسفير بسبب امتصاص الأوزون للأشعة تحت الحمراء
- 9- في الأشن يمد الطحالب الفطر بالكربوهيدرات ويمد الفطر الطحالب بالبروتينات
- 10- في المناطق الاستوائية لا يوجد فرق في مظهر الكساء الخصري على مدار السنة

(25 درجة)

ثانياً: أكمل الفراغات

- 1- يتم تآكل طبقة الأوزون عن طريق 1....., 2....., 3....., 4.....
- 2- من صفات الأشجار التي تستخدم كمصدات الرياح 1....., 2....., 3....., 4.....
- 3- العجز في درجة التشبع يساوي الفرق بين 1..... و 2.....
- 4- التلقيح هو..... ويكون ذاتياً عندما..... بينما يكون خلطياً عندما.....
- 5- في نظام النمل فطر يشارك الفطر بأنزيماته في..... ويحصل الفطر على.....
- 6- التفاعلات السالبة ينتج عنها..... أما التفاعلات الموجبة فينتج عنها.....
- 7- الدبال هو..... ومن أهميته للتربة..... و.....
- 8- يؤدي الرعي الجائر دون إدارة إلى 1....., 2.....
- 9- الصخور الوالدة هي..... وهي عبارة عن خليط من.....
- 10- يطلق على التربة أنها موقعه عندما..... ويطلق عليها منقولة عندما.....

(10 درجات)



ثالثاً: اختر الإجابة الصحيحة من بين الأقواس

- 1- احتياجات الطحالب الحمراء للضوء (أقل - أعلى - مساوية) لاحتياجات الطحالب البنية
- 2- البناء المنشوري في التربة يوجد في الأراضي (الرمليّة - الطينية - المتوسطة)
- 3- بتكون الأنثوسيانين يصوره مركزة في خلايا (النخاع - القشرة الخارجية - الحزم الوعائية)
- 4- تظهر جميع الظواهر والتقلبات المناخية في طبقات الغلاف الجوي (السفلى - العليا - الوسطى)
- 5- حتى يصبح نمو النبات طبيعياً لابد أن (يساوى - يزيد - ينقص) معدل البناء الضوئي عن معدل التنفس
- 6- مصدات الرياح هي حاجز من عدة صفوف من (الأزهار - الأشجار - الحزازيات) متعامدة على اتجاه الرياح
- 7- الهواء الساخن يحمل كمية (أقل - مساوية - أكبر) من بخار الماء مقارنة بالهواء البارد
- 8- التلقيح بالطيور له أهمية كبرى في (الغابات - الماء - الصحراء)
- 9- الافتراض هو التهام أجزاء (حية - ميتة) من الفريسة
- 10- التوافق الحراري هو استجابة النبات مع التغيرات (الموسمية - اليومية - السنوية) لدرجات الحرارة

رابعاً: قارن بين كل مما يأتي: (30 درجة) كل فقرة خمس درجات

- 1- الأهمية البيئية لطبقتي الاستراتوسفير والأيونوسفير في الغلاف الجوي
- 2- الطراز الوراثي والطرارز البيئي
- 3- العوامل المسببة لاختلاف طبيعة قطاع التربة
- 4- العوامل المؤثرة على فاعلية الترسيب
- 5- التوافق الضوئي والأرباع ونقطة الذبول
- 6- قانون ليبج وشيلفورد للتحمل

انتهت الأسئلة

		Tanta UNIVERSITY, Faculty of Science, Department of Botany			
		EXAMINATION for freshmen (second Year) Students OF Chem./Micro			
	Coursetitle:	Prokaryotic organisms		Course Code:	
				MB2101	
Date:	January,2013	Term:	Total assessment Marks:	Time allowed: 2	
3		First	150	hours	

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a - plants b - animals c - fungi d - algae
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II - Complete the sentences with correct answer: - 20 Marks

1 - Virion consists of and

2 - Nucleotide consists of, and

3 - Methods of viruses purification are and

4 - Virus host ranges are, and

5 - The two purine bases are while the two pyrimidine bases are

6 - The ability of a virus to induce a tumor depends on

7 - The of malignant tumors is called

8 - The cancer of white blood cells is called while the cancer of epithelial tissue is called

- 9 - Cell wall of Cyanobacteria consists of and
- 10 - Filament in Cyanobacteria includesand
- 11 - Filament of *Nostoc* has three different types of cells, they are....., and
- 12 - Habitats of Cyanobacteria are and
- 13 - The different types of branching In Cyanobacteria are and
- 14 - The lichens consists of member and member of
- ~~15~~ - The false branching present in and
- ~~16~~ - Prokaryotic cells characterize by absent,, and
- 17 - Heterocysts are classified according to their position into and
- 18 - Viruses are successfully cultivated on large scale for two basic targets, they are and

III - Put sign (✓) front the correct answer and sign (X) front the wrong answer and correct the wrong answer:- **25 Marks**

- 1 - Cyanobacteria reproduce by sexual reproduction ().
- 2 - Cyanobacteria movement by flagella ().
- 3 - The storage food in Cyanobacteria is cyanophycean ().
- 4 - Viral DNA is spiral single helix in most cases ().

- 5 - The development of malignant tumors is called cancer (✓).
- 6 - Virus protein has role on the further steps of infection (✓).
- 7 - The ability of a virus to induce a tumor depends on physiological factors of host (✓).
- 8 - Malignant tumor is so harmful for host (✓).
- 9 - Viruses are very minute and are measured in millimeter ().
- 10 - Cyanophages resemble morphologically bacteriophages ().
- 11 - The viruses can be investigated with light microscop ().
- 12 - The viruses can be cultivated on synthetic media ().
- 13 - The common pigment in cyanobacteria is chlorophyll ().
- 14 - The plant body of *Nostoc* is not differentiated ().
- 15 - Cell wall of cyanobacterial cell consists of cellulose ().

IV - With labeled drawing explain the mechanism of virus infection:
7.5 Marks

Section 2

Complete the following: (25 marks)

1. Methanogens able to convert and into methane to generate anaerobically.
2. Gram-native bacteria have a thick layer of and.....
3. Types of flagella are,,,
4. photoautotrophs are organisms that their own food and can useenergy to produce food
5. Ribosomes arebodies, consist of and
6. Bacterial external layers may present as Or

7. Bacteria can protect themselves from environmental stress including:, and by synthesizing of an
8. Binary fission is
9. Nucleoid region contains
10. Obligate anaerobes must live in.....environment.

B- Compare between the following:

(25 marks)

1. Eukaryotes and prokaryotes.
2. Nocardia, Actinomyces and Propionibacterium
3. Batch and continuous bacterial culture

C-Explain the following:

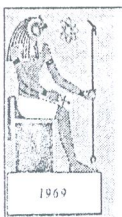
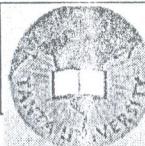
(25 marks)

1. Ways to measure bacterial growth.
2. .Biological importance of bacteria
3. Why archaeobacteria kingdom separated from other bacteria?
4. Structure of cell membrane.

Best Wishes

Examiners

Prof. Dr. Dr. Atef M. Abo-Shady, Dr. Maha Khalil

	Tanta UNIVERSITY FACULTY OF SCIENCE BOTANY DEPARTMENT				
	EXAMINATION FOR LEVEL 2 (Botany)				
	Course Title:	Photosynthesis			Course Code:2103
Jan 2013	Term: first	Total assessment marks:60		Time Allowed: 3 hours	

Answer the following questions:

1- Give account of the following:

(40 mark)

- J.priestly.
- Role of the cortipoids in photosynthesis.
- Red drop.
- P700 and p680.

2- Illustrate by equations the reactions leading to CO₂ fixation in photosynthesis with special reference to the enzymes used in these reactions.


(30 Mark)

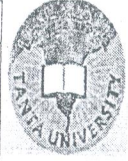
3- Write on the following:

(30 mark)

- Crassulacean acid metabolism.
- Reaction of photorespiration which occur in cytoplasm.
- c4- plants.

With my best wishes

 كلية العلوم	Tanta University - Faculty of Science - Botany Department			
	Examination for Secod level Students of special botany			
	COURSE TITLE	Soil ecology بيئة التربة	COURSE CODE BO2111	
Date, ٦	June 2013	TERM: Second	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS



أجب عن الأسئلة التالية

السؤال الأول : وضح كل مما يأتي: (٢٧ درجة)

- ١ - نشأة الشحنات الكهربائية على سطح حبيبات الطين والذبال. (٩ درجات)
- ٢ - دور الجذور النباتية في التربة. (٩ درجات)
- ٣ - تكون نطاقات التربة Soil profile . (٩ درجات)

السؤال الثاني : اكتب ما تعرفه عن: (٢٧ درجة)

- ١ - مرحلة الـ Pedogenesis لتكوين التربة. (٩ درجات)
- ٢ - الذبال وأهميته البيئية. (٩ درجات)
- ٣ - محلول التربة. (٩ درجات)


السؤال الثالث : أشرح كل مما يأتي (١٨ درجة)

- ١ - المادة العضوية بالتربة. (٩ درجات)
- ٢ - التركيب الكيميائي لمعادن التربة الثانوية Clay minerals. (٩ درجات)

السؤال الرابع : اكتب ما تعرفه عن: (٢٨ درجة)

- a - ديدان الأرض Earthworms . (٩ درجات)
- b - هواء التربة Soil air . (٩ درجات)
- c - العمليات الطبيعية (Physical processes) التي تؤدي الى تكون التربة. (١٠ درجات)

أ د / أحمد شرف الدين

	Tanta University Faculty of Science Botany Department			
	EXAMINATION FOR THIRH LEVEL STUDENTS OF SECTION BIOLOGY			
	COURSE TITLE	GENETICS		COURE CODE
Date, 23	January 2013	TERM: First	TOTAL ASSESSMENT MARKS:150	TIME:2 HOURS

Answer the following questions

The first question: Give brief account on the following: **40 Marks**

- 1- Mitotic cell cycle and cell division.
- 2- Genetic balance.
- 3- Chromosomal systems.
- 4- Pseudoalleles.

The second question: Write on the following: **40 Marks**


- 1- Self sterility alleles in plants.
- 2- Human skin color genes.
- 3- Blood groups in man.
- 4- Different types of centromere positions.

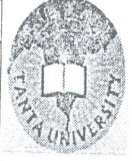
The third question: Write briefly on the following: **40 marks**

- 1- Inheritance of the sex linked red green color blindness.
- 2- Two types of changes in chromosome structure.

The fourth question: Mark the correct answer with (√) and the wrong answer with (x). **30 Marks**

- 1- The test cross involves crossing two heterozygous contrasting phenotypes.
- 2- Mitotic keeps the number of somatic chromosome constant across generations.
- 3- Meiosis ensures that each gametes contains only one member of each homologous pair.
- 4- The failure to synthesize chlorophyll in maize is caused by lethal genes.
- 5- The ABO blood type is controlled by a single gene (the ABO gene) with five alleles.

	Tanta University - Faculty of Science - Botany Department			
	Examination for Secod level Students of special botany			
	COURSE TITLE	Soil ecology بيئة التربة	COURSE CODE BO2111	
Date, ٦	June 2013	TERM: Second	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS



أجب عن الأسئلة التالية

السؤال الأول : وضح كل مما يأتي: (٢٧ درجة)

- ١ - نشأة الشحنات الكهربائية على سطح حبيبات الطين والديال. (٩ درجات)
- ٢ - دور الجذور النباتية في التربة. (٩ درجات)
- ٣ - تكون نطاقات التربة Soil profile . (٩ درجات)

السؤال الثاني : اكتب ما تعرفه عن: (٢٧ درجة)

- ١ - مرحلة الـ Pedogenesis لتكوين التربة. (٩ درجات)
- ٢ - الديال وأهميته البيئية. (٩ درجات)
- ٣ - محلول التربة. (٩ درجات)



السؤال الثالث: أشرح كل مما يأتي (١٨ درجة)

- ١ - المادة العضوية بالتربة. (٩ درجات)
- ٢ - التركيب الكيميائي لمعادن التربة الثانوية Clay minerals. (٩ درجات)

السؤال الرابع: اكتب ما تعرفه عن: (٢٨ درجة)

- a - ديدان الأرض Earthworms. (٩ درجات)
- b - هواء التربة Soil air. (٩ درجات)
- c - العمليات الطبيعية (Physical processes) التي تؤدي الى تكون التربة. (١٠ درجات)

أ د / أحمد شرف الدين

	Tanta UNIVERSITY, Faculty of Science, Department of Botany					
	Final Examination for Freshmen (Second Year) Students OF Special Botany					
	Course title:	Prokaryotes Diversity			COURSE CODE:MB2101	
DATE: 3	JANUARY, 2013	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2HOURS		

Answer the following questions:-

Section 1

I - Choose the correct answer for each of the following: -

15 Marks

- 1 - The viruses are
a – saprophytic b – obligate parasitic c – facultative parasitic d – symbiotic
- 2 - Viruses multiply by
a – vegetative b – asexual c – sexual d – nothing
- 3 - Mycophages infect
a – plants b – animals c – fungi d – algae
- 4 - Viruses can be investigated with.....
a – simple microscope b – electronic microscope c – compound microscope d – all
- 5 - The precipitated viruses which retain its infectivity called
a – virulence b – virion c – living organism d – all
- 6 - Which of the following methods are used for purification of viruses
a – salting out b – precipitation by alcohol c – ultracentrifugation d – all
- 7 - Viruses are measured in
a – meter b – nanometer c – liter d - gram
- 8 - Plant viruses may be taken into cell by.....
a – insects b – plaque c - phagocytosis d – nothing
- 9 - The virus lose its infectivity by exposing to.....
a – ultra violet rays b – water c – alcohol d – ice
- 10 - False branching present in
a – Oscillatoria b – Nostoc c – Scytonema d – all
- 11 - Cyanobacteria reproduce by
a - hormospores b – akinetes c – endospores d – all
- 12 - The functions of heterocyst are
a – reproduction b – nitrogen fixation c – hormogones formation d – all
- 13 – Cyanobacteria consisted of
a – phycoerythrin b – Chl. a c – phycocyanin d – all
- 14 -- Cyanobacteria are
a – eukaryotes b – acellular c – prokaryotes d - all

II - Complete the sentences with correct answer: -

10

- 1 - The cancer of white blood cells is called while the cancer of epithelial tis called
- 2 - Nucleotide consists ofand
- 3 - Methods of viruses purification areand
- 4 - According to the shape, viruses can classified intoand
- 5 - The extracellular infectious stage is called while the precipitated viruses which retain its infectivity is called
- 6 - Viruses are successfully cultivated on large scale for two basic targets, they are..... and
- 7 - The viral DNA shape iswhile viral RNA shape is
- 8 - Cell wall of Cyanobacteria consists ofand
- 9 - Filament in Cyanobacteria consist of and
- 10 - Filament of Nostoc has three different types of cells, they areand
- 11 - Habitats of Cyanobacteria are and
- 12 - Heterocysts are classified according to their position intoand
- 13 - The protoplasm of cyanophycean cell is differentiated into and
- 14 - Asexual reproduction in cyanophyta occurs byand
- 15 - Prokaryotic cells characterize byand
- 16 - Nostoc reproduces by and

III - Put sign (✓) opposite the correct answer and sign (X) opposite the wrong answer:-

20 Marks

- | | |
|--|-----------|
| 1 - Cyanobacteria reproduce by sexual reproduction | (). |
| 2 - Cyanobacteria movement by flagella | (). |
| 3 - The storage food in Cyanobacteria is cyanophycean | (). |
| 4 - Oscillatoria consists of heterocysts | (). |
| 5 - Heterocyst stimulates the production of akinetes | (). |
| 6 - The cell wall of cyanobacterial cell consists of cellulose | (). |
| 7 - Cyanophyta is photosynthetic prokaryotes | (). |

- 8 - Myxophyceae is gram-negative prokaryotes ()
- 9 - Some members of cyanobacteria can fix atmospheric nitrogen ()
- 10 - The protein coat of viruses consists of both DNA and RNA ()
- 11 - Cyanophages resemble morphologically bacteriophages ()
- 12 - The viruses can be cultivated on synthetic media ()
- 13 - The development of malignant tumors is called cancer ()
- 14 - Viruses can grow and replicate outside of their host ()
- 15 - Plant viruses can infect the plant with vector such as insects ()
- 16 - The viral RNA consists of thymine ()
- 17 - Mutation in viruses takes places by using irradiations ()

IV - With labeled drawing compare between the false and true branching in Cyanobacteria, and give an example for each of them. 5 Marks

Section 2

I-Complete the following: -

20 Marks

1. Bacterial chromosome consist of
2. Gram- positive bacteria have layer of and.....
3. Types of flagella.....,..... and.....
4. Autotrophs are organism that Their own food.
5. Cell membrane consists of
6. Bacteria external layers may present as or
7. Budding is.....
8. Ribosomes are bodies, consist of and.....
9. Outer membrane is present on cell wall.
10. Prokaryotes cell size is.....

II- Compare between the following:

10 Marks

1. Archaeobacteria and eubacteria.
2. Heterotrophs and autotrophs.

III- Write short notes on the following:

20 Marks

1. Positive aspects of bacteria.
2. Biological importance of bacteria.
3. Binary fission.
4. Bacterial endospores.

Examiners:

Best wishes

Prof. Dr. Dr. Atef Abo-Shady

Dr. Maha Khalil

Tanta UNIVERSITY, Faculty of Science, Department of Botany				
EXAMINATION for freshmen (second Year) Students OF Chem./Micro				
Coursetitle:	Prokaryotic organisms		Course Code: MB2101	
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5 - False branching is characteristic of
a - Scytonema b - Gloeotrichia c - Nostoc d - Anabaena


6 - Scytonema usually reproduces by
a - hormogonia b - akinetes c - heterocysts d - endospores

7 - Mycophages infect
a - plants b - animals c - fungi d - algae

8 - Viruses multiply by
a - vegetative b - asexual c - sexual d - nothing

9 - The virus lose its infectivity by
a - ultra violet rays b - water c - alcohol d - ice

10 - Plant viruses may be taken into animal cell by.....
a - insects b - plaque c - phagocytosis d - nothing

 كلية العلوم	Tanta University Faculty of Science Botany Department			
	EXAMINATION FOR THIRH LEVEL STUDENTS OF SECTION BIOLOGY			
	COURSE TITLE	GENETICS		COURE CODE
Date, 23	January 2013	TERM: First	TOTAL ASSESSMENT MARKS:150	TIME:2 HOURS

Answer the following questions

The first question: Give brief account on the following: **40 Marks**

- 1- Mitotic cell cycle and cell division.
- 2- Genetic balance.
- 3- Chromosomal systems.
- 4- Pseudoalleles.

The second question: Write on the following: **40 Marks**


- 1- Self sterility alleles in plants.
- 2- Human skin color genes.
- 3- Blood groups in man.
- 4- Different types of centromere positions.

The third question: Write briefly on the following: **40 marks**

- 1- Inheritance of the sex linked red green color blindness.
- 2- Two types of changes in chromosome structure.

The fourth question: Mark the correct answer with (√) and the wrong answer with (x). **30 Marks**

- 1- The test cross involves crossing two heterozygous contrasting phenotypes.
- 2- Mitotic keeps the number of somatic chromosome constant across generations.
- 3- Meiosis ensures that each gametes contains only one member of each homologous pair.
- 4- The failure to synthesize chlorophyll in maize is caused by lethal genes.
- 5- The ABO blood type is controlled by a single gene (the ABO gene) with five alleles.

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY		
	EXAMINATION FOR SECOND YEAR STUDENTS OF SPECIAL BOTANY		
	COURSE TITLE:	NON-FLOWERING PLANTS	COURSE CODE:BO2109
DATE: JANUARY, 2012-2013	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

A) Complete the following spaces: (30 M)

- 1- In *Bryophyta* the dominant phase iswhile in *Ptridophyta* is
- 2- Alternation of generations means
- 3- The capsule of *Marchantia* sporophyte contains and while that of *Riccia* contains
- 4- The origin of anthredia in *Pellia* iswhile that of archegonia is.....
- 5- Elaters of *Pellia* are borne on
- 6- *Sphagnum* leaf containcells for photosynthesis and cells for water storage.
- 7- The spore sac of *Sphagnum* is surrounded by a tissue called
- 8- The spores of Musci germinate into
- 9- The capsule of *Polytrichum* is closed by and
- 10- The first appearance of leaves in, while the first appearance of roots in

B) Check (✓) or (x) and correct the wrong answer: (30 M)

- 1- *Riccia* sporophyte is the most advanced sporophyte in the plant kingdom ()
- 2- *Sphagnum* is used in foul and coal production ()
- 3- *Funaria* reproduces vegetatively by gemma cup ()
- 4- The stel of *Psilotum* is a protostel ()
- 5- Archegoniates are the linking ring between lower and higher plants ()
- 6- *Polytrichum* sporophyte is carried on pseudopodium ()
- 7- *Pellia* gametophyte is dioecious ()
- 8- The first appearance of leaf trace in *Psilotum* ()
- 9- The wing cells are found in *Funaria* and *Polytrichum* leaves ()
- 10- Rhizoids are rough, while scales are smooth ()

C) Write on the following illustrating your answer with labeled drawings as possible: (40 M)

- 1- Internal structure of *Lycopodium* stem.
- 2- Life history of *Riccia* sp.
- 3- Synangium.
- 4- *Sphagnum* leaf.
- 5- Capsule of *Funaria*.

With best wishes

Dr/ Khalil Mahfouz

II - Complete the sentences with correct answer: -**10 Marks**

- 1 - The cancer of white blood cells is called while the cancer of epithelial tissue is called
- 2 - Nucleotide consists ofand
- 3 - Methods of viruses purification areand
- 4 - According to the shape, viruses can classified intoand
- 5 - The extracellular infectious stage is called while the precipitated viruses which retain its infectivity is called
- 6 - Viruses are successfully cultivated on large scale for two basic targets, they are..... and
- 7 - The viral DNA shape iswhile viral RNA shape is
- 8 - Cell wall of Cyanobacteria consists ofand
- 9 - Filament in Cyanobacteria consist of and
- 10 - Filament of Nostoc has three different types of cells, they areand
- 11 - Habitats of Cyanobacteria are and
- 12 - Heterocysts are classified according to their position intoand
- 13 - The protoplasm of cyanophycean cell is differentiated into and
- 14 - Asexual reproduction in cyanophyta occurs byand
- 15 - Prokaryotic cells characterize byand
- 16 - Nostoc reproduces by and

III - Put sign (✓) opposite the correct answer and sign (X) opposite the wrong answer:-**20 Marks**

- 1 - Cyanobacteria reproduce by sexual reproduction ().
- 2 - Cyanobacteria movement by flagella ().
- 3 - The storage food in Cyanobacteria is cyanophycean ().
- 4 - Oscillatoria consists of heterocysts ().
- 5 - Heterocyst stimulates the production of akinetes ().
- 6 - The cell wall of cyanobacterial cell consists of cellulose ().
- 7 - Cyanophyta is photosynthetic prokaryotes ().

- 8 - Myxophyceae is gram-negative prokaryotes ().
- 9 - Some members of cyanobacteria can fix atmospheric nitrogen ().
- 10 - The protein coat of viruses consists of both DNA and RNA ().
- 11 - Cyanophages resemble morphologically bacteriophages ().
- 12 - The viruses can be cultivated on synthetic media ().
- 13 - The development of malignant tumors is called cancer ().
- 14 - Viruses can grow and replicate outside of their host ().
- 15 - Plant viruses can infect the plant with vector such as insects ().
- 16 - The viral RNA consists of thymine ().
- 17 - Mutation in viruses takes places by using irradiations ().

IV - With labeled drawing compare between the false and true branching in Cyanobacteria, and give an example for each of them. 5 Marks

Section 2

I-Complete the following: -

20 Marks

1. Bacterial chromosome consist of
2. Gram- positive bacteria have layer of and.....
3. Types of flagella.....,..... and.....
4. Autotrophs are organism that Their own food.
5. Cell membrane consists of
6. Bacteria external layers may present as or
7. Budding is.....
8. Ribosomes are bodies, consist of and.....
9. Outer membrane is present on cell wall.
10. Prokaryotes cell size is.....

II- Compare between the following:

10 Marks

1. Archaeobacteria and eubacteria.
2. Heterotrophs and autotrophs.

III- Write short notes on the following:

20 Marks



1. Positive aspects of bacteria.
2. Biological importance of bacteria.
3. Binary fission.
4. Bacterial endospores.

Examiners:

Best wishes

Prof. Dr. Dr. Atef Abo-Shady

Dr. Maha Khalil

	Tanta UNIVERSITY, Faculty of Science, Department of Botany					
	Final Examination for Freshmen (Second Year) Students OF Special Botany					
	Course title:	Prokaryotes Diversity			COURSE CODE:MB2101	
	E: 3	JANUARY, 2013	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2HOURS	



Answer the following questions:-

Section 1

I - Choose the correct answer for each of the following: -

15 Marks

- 1 - The viruses are
a – saprophytic b – obligate parasitic c – facultative parasitic d – symbiotic
- 2 - Viruses multiply by
a – vegetative b – asexual c – sexual d – nothing
- 3 - Mycophages infect
a – plant s b – animals c – fungi d – algae
- 4 - Viruses can be investigated with.....
a – simple microscope b – electronic microscope c – compound microscope d – all
- 5 - The precipitated viruses which retain its infectivity called
a – virulence b – virion c – living organism d – all
- 6 - Which of the following methods are used for purification of viruses
a – salting out b – precipitation by alcohol c – ultracentrifugation d – all
- 7 - Viruses are measured in
a – meter b – nanometer c – liter d - gram
- 8 - Plant viruses may be taken into cell by.....
a – insects b – plaque c - phagocytosis d – nothing
- 9 - The virus lose its infectivity by exposing to.....
a – ultra violet rays b – water c – alcohol d – ice
- 10 - False branching present in
a – Oscillatoria b – Nostoc c – Scytonema d – all
- 11 - Cyanobacteria reproduce by
a - hormospores b – akinetes c – endospores d – all
- 12 - The functions of heterocyst are
a – reproduction b – nitrogen fixation c – hormogones formation d – all
- 13 – Cyanobacteria consisted of
a – phycoerythrin b – Chl. a c – phycocyanin d – all
- 14 – Cyanobacteria are
a – eukaryotes b – acellular c – prokaryotes d - all

	Tanta UNIVERSITY FACULTY OF SCIENCE BOTANY DEPARTMENT					
	EXAMINATION FOR LEVEL 2 (Botany)					
	Course Title:	Photosynthesis				Course Code:2103
Jan 2013	Term: first	Total assessment marks:60		Time Allowed: 3 hours		

Answer the following questions:

1- Give account of the following:

(40 mark)

- J.priestly.
- Role of the cortipoids in photosynthesis.
- Red drop.
- P700 and p680.

2- Illustrate by equations the reactions leading to CO₂ fixation in photosynthesis with special reference to the enzymes used in these reactions.


(30 Mark)

3- Write on the following:

(30 mark)

- Crassulacean acid metabolism.
- Reaction of photorespiration which occur in cytoplasm.
- c4- plants.

With my best wishes

	TANTA UNIVERSITY		
	FACULTY OF SCIENCE		
	DEPARTMENT OF BOTANY		
	EXAMINATION FOR SECOND YEAR STUDENTS OF SPECIAL BOTANY		
COURSE TITLE:	NON-FLOWERING PLANTS		COURSE CODE:BO2109
DATE: JANUARY, 2012-2013	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED:2 HOURS

A) Complete the following spaces: (30 M)

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- 2- Alternation of generations means
- 3- The capsule of *Marchantia* sporophyte contains and while that of *Riccia* contains
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B) Check (✓) or (x) and correct the wrong answer: (30 M)


- 1- *Riccia* sporophyte is the most advanced sporophyte in the plant kingdom ()
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- 1- Internal structure of *Lycopodium* stem.
- 2- Life history of *Riccia* sp.
- 3- Synangium.
- 4- *Sphagnum* leaf.
- 5- Capsule of *Funaria*.

With best wishes

Dr/ Khalil Mahfouz

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY		
	EXAMINATION FOR FRESHMEN (SECOND YEAR) STUDENTS OF SPECIAL BOTANY		
COURSE TITLE:	Ecology	COURSE CODE: BO2101	
DATE:	17 JAN 2013	TERM: FIRST TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED: 3 HOURS

أولاً: أ.د. محمد البحيري

السؤال الأول : (35 درجة)

أ:- أكمل (25 درجة)

- 1- يتكون المكون الحي للنظام البيئي من مستويات رئيسية هي
- 2- يوجد نوعان من السلاسل الغذائية هما
- 3- تحتوي الدورات الإحيائية الأرضية الكيميائية على دورة مثل (.....) ودورة مثل (.....)
- 4- من العوامل اللاحيائية هي
- 5- المعايير الرئيسية التي تتحكم في كثافة الجماعات هي
- 6- توزع الأفراد داخل الجماعات على ثلاثة أنماط هي
- 7- من العوامل المعتمدة على الكثافة هي

ب:- ضع علامة (√) أو (X) أمام العبارات التالية مع تصحيح الخطأ إن وجد: (10 درجات)

- 1- تحول الطاقة من صورة إلى أخرى يصاحبها فقد جزء من الطاقة الحرارية متاحة للاستخدام ()
- 2- تستمد الكائنات الحية احتياجاتها من العناصر الغذائية من المكون الإحيائي للنظام البيئي ()
- 3- القدرة التكاثرية المدخرة لكائن ما تسمى بالكفاءة التكاثرية الفعلية ()
- 4- الكثافة البيئية هي العدد الكلي للأفراد الموجودة في المساحة الكلية ()
- 5- معدل النمو النسبي هو الزيادة في عدد أفراد النبات في وحدة الزمن ()

السؤال الثاني: (40 درجة)

أ:- اكتب المصطلح العلمي "باللغتين العربية والانجليزية" الدال على العبارات التالية (24 درجة)

- 1- التابع الاستهلاكي للغذاء في النظام البيئي لأراضي المراعي تسمى
- 2- يطلق على الإنتاج في الكائنات ذاتية التغذية باسم
- 3- مجموعة من الأفراد تنتمي إلى نوع واحد في مساحة معينة من الأرض يسمى
- 4- مقدار الزيادة في الوزن الجاف للنبات ومجموع مساحة أوراقه يسمى
- 5- ظاهرة انتشار الجماعات شاملة الاستيطان والاعتراب تسمى
- 6- العدد الكلي للأفراد التابعين لنوع ما والتي تعيش في موطن بيئي تحت ظروف معينة

ب:- بالرسم فقط مع كتابة البيانات :- (16 درجة) كل فقرة 4 درجات

- 1- مسري الطاقة في النموذج ذو الشعبتين
- 2- الفرق بين منحنى النمو الآسي ومنحنى النمو السيمويدي
- 3- الفرق بين شبكة غذائية أرضية وشبكة غذائية مائية
- 4- العناصر التي تحدد تركيب وكثافة الجماعة

الامتحان من صفحتين