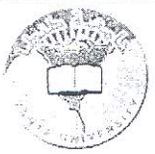
المستوى الثالث

نبات

	Tanta University Faculty of Science Botany Department	
Theoretical exam.	Assessment = 100 marks.	Time allowed: 2 hours.
Course Title = Enzymes in Microorganisms.		Course code = MB 3208.
Chemistry-Microbiology double major program.		Academic year: 2016/2017.
Juniors (Level: 3 – Semester: 2)		الإختبار فى ورقة واحدة. 15/6/2017
يسمح للطلاب باستخدام الألوان الخشبية فى توضيح إجاباتهم.		

Answer the following questions, proved with equations, and labeled colored diagrams:	Mark
1- Illustrate how enzymes lower the activation energy of a reaction.	10 marks
2- Explain the induced fit model for the mode of enzyme action.	10 marks
3- Compare between the action of lyases and ligases.	10 marks
4- Illustrate how cells generate their own enzymes with unique genetic coding.	10 marks
5- Illustrate the ideal fermenter structure for optimized microbial enzyme production.	10 marks
6- Illustrate the diagrammatic biochip structure, advantages and its applications.	10 marks
7- Discuss how the cell can regulate the activity of its enzymes.	10 marks
8- Mention the different types of enzyme inhibition.	10 marks
9- Discuss one of the applications of microbial enzymes in the industrial field, represented during your study; prove your idea with equations, and labeled, colored diagrams.	20 marks

Best wishes..... Examiner:	Dr.: Anwer S.M. El-Badry.

1969	*Tanta UNIVERSITY* *FACULTY OF SCIENCE* *DEPARTMENT OF BOTANY*			
	EXAMINATION for Juniors (ThirdYear) students of Special Botany			
	COURSE TITLE:	Stress Physiology		COURSE CODE: BO3210
DATE: 15/6/2017	JUNE/ 2017	TERM: SECOND	MARKS: 100	TIME: 2 HOURS.

I-Define the following: (15 Marks, each 3 Marks)

1-Trehalose 2- Phytoremediation 3-Heavy metal
4. Glutathione 5. Photo-oxidative stress.

II-Complete the following: (25 Marks, each 5 Marks)

1-The plant responds to abiotic stresses with special defence mechanisms including both .....and.....antioxidative systems which play an important role in preventing.....damage.

2- Under drought stress, the ..... is synthesized from carotenoids by .....

3- Heat stress may affect..... and ..... and the importance of these two factors depends upon which .....is considered.

4. The plant processes that are particularly sensitive to heat stress are....,...and.....

5- The indicators of the toxic effects of heavy metals are.....'.....and.....

III-Discuss the following (60 Marks, each 15 marks)

1- The physiological responses of plants to drought stress

2–The growth and development of plants under salinity stress.

3- The harmful effects of heavy metal stress and the different mechanisms of plant responses to it.

4- The photo-oxidative stress and the non-enzymatic antioxidants.

EXAMINERS	PROF.DR./ WEDAD ABD EL-AZIZ KASIM

	Tanta UNIVERSITY, Faculty of Science, Department of Botany				
	EXAMINATION for freshmen (Third level) students of Special Microbiology				
	COURSETITLE:	Biological control		COURSE CODE:MB3206	
DATE: 11/6/ 2017	JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2HOURS	

Answer all following questions:

First questions **(40 Marks, 8 each)**

Write briefly on:

1-Competative ability.
2- Chitosan as biological control agents.
3-Mycoparasitism.
4- Chestnut blight.
5- *Beauveria bassiana* as insect pathogenic fungus.

Second questions **(20 Marks):**

Complete the following questions:

1- There are four major classes of hyperparasitis namely ----------,----------,----------and---------.
2- Toxin produce by *Gliocldium virens* called ----------.
3- *Metrahizium ansipoliae* use for control of ----------.
4- Symptoms of infected insects ----------and----------.
5- Systemic acquired resistance mediated by ----------while induced systemic resistance mediated by ----------.
6- Damping –off disease caused by---------and controlled by----------.

Third questions **(20 Marks,4 each)**

Choose the correct answer of the following:

1-Mechanism of direct antagonism is
- a) competition
- b) Induction of host resistance
- c) Non of these.

2- *Bacillus subtilis* produce antibiotic called
- a) Bacilomycin D
- b) Agrocin
- c) None of these

3-Most of fungi used for the control of insect pests belong to :
- a) *Hyphomycetes*

	Tanta UNIVERSITY, Faculty of Science, Department of Botany				
	EXAMINATION for freshmen (Third level) students of Special Microbiology				
	COURSETITLE:	Biological control		COURSE CODE:MB3206	
DATE: 11/6/ 2017	JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2HOURS	

Answer all following questions:

First questions **(40 Marks, 8 each)**

Write briefly on:

1-Competative ability.
2- Chitosan as biological control agents.
3-Mycoparasitism.
4- Chestnut blight.
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	Tanta UNIVERSITY, Faculty of Science, Department of Botany				
	EXAMINATION for freshmen (Third level) students of Chemistry/Microbiology				
	COURSETITLE:	Biological control		COURSE CODE:MB3206	
DATE: 11/6/ 2017	JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2HOURS	

Answer all following questions:

First questions **(20 Marks, 4 each)**

Write briefly on:

1- Mycoparasitism.

2-Competative ability.

3-Advantage of fungi for controlling insect pest.

4- Chitosan as biocontrol (as pathogen suppression).

5- *Beauveria bassiana* as insect pathogenic fungus.

Second questions **(10 Marks, 2 each)**

Complete the following questions:

1- Toxin produce by *Gliocladium virens* called----------.

2- Antibiotic produce by *Trichoderma virens* called ----------.

3- *Metrahizium anisopliae* use for control of ----------.

4- Symptoms of infected insects ----------and----------.

5- Post – harvestrot of citrus fruit caused by ---------and controlled by--------.

Third questions **(10 Marks, 2 each)**

Choose the correct answer of the following:

1-Mechanism of Mixed-path antagonism is

a) Antibiosis
b) Lytic enzymes
c) Unregulated waste products
d) All of these.

2- *Pseudomonas putida* produce antibiotic called

a) Phenazine
b) Iturin A
c)None of these

3-Most of fungi used for the control of insect pests belong to :

a) *Hyphomycetes*
b) *Entomophthorales*

	Tanta UNIVERSITY, Faculty of Science, Department of Botany				
	EXAMINATION for freshmen (Third level) students of Chemistry/Microbiology				
	COURSETITLE:	Biological control		COURSE CODE:MB3206	
DATE: 11/6/ 2017	JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2HOURS	

Answer all following questions:

First questions **(20 Marks, 4 each)**

Write briefly on:

1- Mycoparasitism.

2-Competative ability.

3-Advantage of fungi for controlling insect pest.

4- Chitosan as biocontrol (as pathogen suppression).

5- *Beauveria bassiana* as insect pathogenic fungus.

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	Tanta University Faculty of Science Department of Botany			
	EXAMINATION for level 3 Students of Special Botany			
	Course title:	Medicinal and Aromatic plants		Course Code:BO3208
Date: 11/6	2017	Term: second	Total assessment Marks: 100	Time ALLOWED:2 ours

السؤال الأول: - أكمل: **(20 درجات)**

1- من فوائد الزيوت الطيارة للنبات.....1.....و.....2.....و.....3.....

2- من نباتات طاردة او قاتلة للديدان: 1..و2....و3....و4.....و5....و6....

3- من أهم الطرق لصناعة الادوية من الاعشاب هي :1.....و.....2.....و....3.و..4.....و...5.....و....6....

4- من أهم النباتات التي تحتوي علي القلويدات هي: 1.....و.....2.....و....3.....و.....4.....و.....5.....

5- من النباتات التي لها تأثر هرموني ذكري .....1.....و.....2.....و.....3.....و....4.....و....5.....

السؤال الثاني: تكلم فيما يلي: (30 درجة)

1- اكتب (في جدول) الاسم العلمي والمادة الفعالة والجزء المستخرج منه المادة الفعالة لكل من النباتات الآتية:-
الينسون - البردقوش – حصا لبان – السكران – الخردل (15 درجات)

2- اذكر ثلاث فوائد طبية لكل مما يأتي مع كتابة الاسم الدارج لكل منهم . (15 درجات)

Citrullus colocynthis – Camellia sinensis – Chinese rhbarb – Ammi visnaga – Dawsonia inrmis

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السؤال الثالث: (25 درجة)

1- اختر من (أ) ما يناسب من (ب) مع كتابة الاسم الدارج والجزء المستخدم للنباتات في (أ): (15 درجة)

(أ) *1- Papaver somniferum* *2-Atropa belladonna* *3-Eucalyptus globulus*
4- Glycorrhiza globra *5- Punica granatum*

(ب) 1- استرخاء في العضلات 2- الالتهابات الجلدية الفطرية 3- طارد للدودة الشريطية 4- إحداث تمدد إنسان العين 5-اضطرابات الأنف والحنجرة 6- قرحة المعدة 7- النقرس 8- الديزونتاريا الأميبية 9- الادمان 10- علاج الامساك 11- مدر للبول

2- ما المقصود ب: (10 درجات)
القلويدات – الراتنجات – التانينات – العقاقير – البلادونا

السؤال الرابع: - تكلم فيما يلي: (25 درجة)

1- ناقش الاسباب التي تؤدي الي فساد النباتات الطبية والعطرية اثناء تخزينها. (10 درجات)
2- ناقش أهمية عملية التجفيف للنباتات الطبية والعطرية. (5 درجات)
3- أهم المميزات والمشاكل التي تواجهه زراعة النباتات الطبية والعطرية (10 درجات)

انتهت الأسئلة

مع تمنياتي لكم بالتوفيق والنجاح أستاذ المادة: أ.د.محمد أحمد البحيري

	Tanta University Faculty of Science Department of Botany			
	EXAMINATION for level 3 Students of Special Botany			
	Course title:	Medicinal and Aromatic plants		Course Code:BO3208
Date: 11/6	2017	Term: second	Total assessment Marks: 100	Time ALLOWED:2 ours

السؤال الأول: - أكمل: **(20 درجات)**

1- من فوائد الزيوت الطيارة للنبات.....1.....و.....2.....و.....3.....

2- من نباتات طاردة او قاتلة للديدان: 1..و2....و3....و4.....و5....و6....

3- من أهم الطرق لصناعة الادوية من الاعشاب هي :1.....و.....2.....و....3.و..4.....و...5.....و....6....

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5- من النباتات التي لها تأثر هرموني ذكري .....1.....و.....2.....و.....3.....و....4.....و....5.....

السؤال الثاني: تكلم فيما يلي: (30 درجة)

1- اكتب (في جدول) الاسم العلمي والمادة الفعالة والجزء المستخرج منه المادة الفعالة لكل من النباتات الآتية:-
الينسون - البردقوش – حصا لبان – السكران – الخردل (15 درجات)

2- اذكر ثلاث فوائد طبية لكل مما يأتي مع كتابة الاسم الدارج لكل منهم . (15 درجات)

Citrullus colocynthis – Camellia sinensis – Chinese rhbarb – Ammi visnaga – Dawsonia inrmis

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السؤال الثالث: (25 درجة)

1- اختر من (أ) ما يناسب من (ب) مع كتابة الاسم الدارج والجزء المستخدم للنباتات في (أ): (15 درجة)

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2- ما المقصود ب: (10 درجات)
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انتهت الأسئلة

مع تمنياتي لكم بالتوفيق والنجاح أستاذ المادة: أ.د.محمد أحمد البحيري

1969	*Tanta UNIVERSITY* *FACULTY OF SCIENCE* *DEPARTMENT OF BOTANY*			
	EXAMINATION for Juniors (ThirdYear) students of Special Botany			
	COURSE TITLE:	Stress Physiology		COURSE CODE: BO3210
DATE: 15/6/2017	JUNE/ 2017	TERM: SECOND	MARKS: 100	TIME: 2 HOURS.

I-Define the following: (15 Marks, each 3 Marks)

1-Trehalose 2- Phytoremediation 3-Heavy metal
4. Glutathione 5. Photo-oxidative stress.

II-Complete the following: (25 Marks, each 5 Marks)

1-The plant responds to abiotic stresses with special defence mechanisms including both .....and.....antioxidative systems which play an important role in preventing.....damage.

2- Under drought stress, the ..... is synthesized from carotenoids by .....

3- Heat stress may affect..... and ..... and the importance of these two factors depends upon which .....is considered.

4. The plant processes that are particularly sensitive to heat stress are....,...and.....

5- The indicators of the toxic effects of heavy metals are.....'.....and.....

III-Discuss the following (60 Marks, each 15 marks)

1- The physiological responses of plants to drought stress

2–The growth and development of plants under salinity stress.

3- The harmful effects of heavy metal stress and the different mechanisms of plant responses to it.

4- The photo-oxidative stress and the non-enzymatic antioxidants.

EXAMINERS	PROF.DR./ WEDAD ABD EL-AZIZ KASIM

	Tanta UNIVERSITY, Faculty of Science, Department of Botany	
	Final Examination for (3rd Year) Students of Microbiology	
	COURSE TITLE: Phycology (BO3222)	

DATE: 13 JUNE, 2017	TERM: SECOND SEMESTER	TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED: 2 HOURS

ANSWER ON THE FOLLOWING QUESTIONS

A. Give an account on Only four with labeled drawing if possible: ***(60 Marks, 15 Mark each)***

1. Range of morphological structure in algae.
2. Flagella types in algae
3. The possible life cycles of the diploid algae.
4. Compare between the Pennales and Centerales diatoms.
5. Cyanobacterial cell structure.

B. Complete the following: ***(15 Marks, 3 Marks each)***

1. *Vaucheria* may be reproduce a sexually by……..,……and…….
2. Auxospores in diatoms can be fromed by……..,……..and……
3. ……..is euglnoid alga that characteristic by presence of external cyst.
4. ……its type of spores that are formed in the distal part of the protoplasm forming chain.
5. *Scytonema* form false branch arises in a position …….. to heterocyst, however in *Tolypothrix* the false branch arise in position ……..to heterocyst.

C. Write short notes on the following with labeled drawing: ***(40 Marks)***

1- Compare between the distinguishing characters of phyophyta and chlorophyta
2- Compare between the distinguishing characters of bangiophyceae and floridophyceae
3- Cell division in *Oedogonium*
4- Life cycle of *laminaria*

D. Complete the following ***(35 Marks)***

1- In *Ectocarpus* haploid zoospore are formed in ……, whereas diploid zoospore are formed in …….
2- *Ulothrix* have two types of zoospore according to the size …..…… and ……..……
3- Reserved food in Rhodophyta is ……
4- Some of the intercalary cells of *Oedogonium* contain ring-like structures called……..…
5- In *Batrachospermum* the basal part of carpoganium swollen and contain ……., however the upper part elongated to form …….. to receive …….
6- *Fucus* was member of order ……
7- Asexual reproduction of *Laminaria* by motile …… produced in ……. sporangia arranged in …….. on both sides of the …….
8- Sexual reproduction in Spirogyra by……which have two types……..and ……
9- Reproduction in *Fucus* by …….. and ……

Examiners: ***Best wishes……***

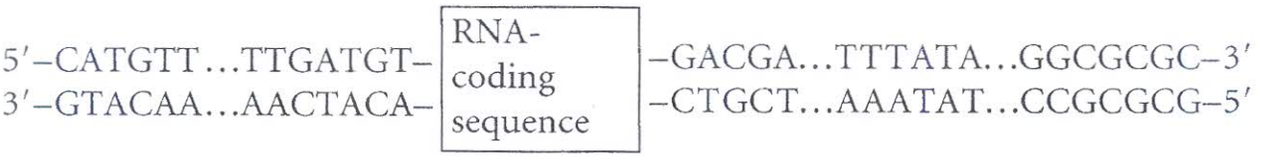
Prof. Dr. Shimaa El Shafay ***Dr. Mostafa ElShobary***

1969	BOTANY DEPARTMENT - TANTA UNIVERSITY - FACULTY OF SCIENCE		TANTA UNIVERSITY
	EXAMINATION FOR JUNIORS (THIRD YEAR) CHEM./ MICROBIOLOGY STUDENTS		
	COURSE TITLE: INTRODUCTION TO MOLECULAR GENETICS	COURSE CODE: BO3242	
18 JUNE 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2 HOURS

ANSWER THE FOLLOWING QUESTIONS

1. **The base composition of an RNA virus was analyzed and found to be 14.1% A, 14.0% U, 36.2% G, and 35.7% C. Would you conclude that the viral genetic material is single-stranded RNA or double-stranded RNA, and why? (8 Marks)**

2. **The following diagram represents a sequence of nucleotides surrounding an RNA-coding sequence.**



   a. Is the RNA-coding sequence likely to be from a bacterial cell or from a eukaryotic cell? How can you tell? **(4 Marks)**
   b. Which DNA strand will serve as the template strand during the transcription of the RNA-coding sequence? **(4 Marks)**
   c. Where RNA polymerase is going to bind? Why? **(4 Marks)**

3. **Write short notes on <u>two</u> of the followings: (<u>15 Marks</u>)**
   a. How RNA polymerase determines which DNA strand is the template strand.
   b. Differences between synthesis of RNA transcripts and DNA replication.
   c. Phenotypic effects of mutations.

4. **Compare between <u>two</u> of the followings: (<u>15 Marks</u>)**
   a. Mismatch repair and Direct DNA repair systems.
   b. Rho-dependent and Rho-independent chain terminators.
   c. Forms of DNA.

With all my Best Wishes

EXAMINERS	PROF. DR. REDA GAAFAR	PROF. DR. ADEL ELSHANSHOURY

1969	BOTANY DEPARTMENT - TANTA UNIVERSITY - FACULTY OF SCIENCE		TANTA UNIVERSITY
	EXAMINATION FOR JUNIORS (THIRD YEAR) CHEM./ MICROBIOLOGY STUDENTS		
	COURSE TITLE: INTRODUCTION TO MOLECULAR GENETICS	COURSE CODE: BO3242	
18 JUNE 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2 HOURS

ANSWER THE FOLLOWING QUESTIONS

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With all my Best Wishes

EXAMINERS	PROF. DR. REDA GAAFAR	PROF. DR. ADEL ELSHANSHOURY

1969	BOTANY DEPARTMENT - TANTA UNIVERSITY - FACULTY OF SCIENCE		TANTA UNIVERSITY
	EXAMINATION FOR JUNIORS (THIRD YEAR) CHEM./ MICROBIOLOGY STUDENTS		
	COURSE TITLE: INTRODUCTION TO MOLECULAR GENETICS	COURSE CODE: BO3242	
18 JUNE 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2 HOURS

ANSWER THE FOLLOWING QUESTIONS

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2. **The following diagram represents a sequence of nucleotides surrounding an RNA-coding sequence.**

5′–CATGTT…TTGATGT– [RNA-coding sequence] –GACGA…TTTATA…GGCGCGC–3′
3′–GTACAA…AACTACA– –CTGCT…AAATAT…CCGCGCG–5′

   a. Is the RNA-coding sequence likely to be from a bacterial cell or from a eukaryotic cell? How can you tell? **(4 Marks)**
   b. Which DNA strand will serve as the template strand during the transcription of the RNA-coding sequence? **(4 Marks)**
   c. Where RNA polymerase is going to bind? Why? **(4 Marks)**

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   b. Rho-dependent and Rho-independent chain terminators.
   c. Forms of DNA.

With all my Best Wishes

EXAMINERS	PROF. DR. REDA GAAFAR	PROF. DR. ADEL ELSHANSHOURY

TANTA UNIVERSITY
FACULTY OF SCIENCE
BOTANY DEPARTMENT

امتحان الفصل الدراسى الثاني للمستوى الثالث كيمياء/نبات

Course Title:	Economic Botany and crop plants		Course Code: Bo 3232
June 8, 2017	Term: Second	Total assessment marks: 100	Time Allowed: 2hour

السؤال الأول: أكمل العبارات التالية (٣٠ درجة)

١ - تنقسم المحاصيل تبعا لموسم الزراعة إلى .....و.....و.....(٦ درجات)

٢ - في الأراضي الطينية تكون نسبة الطمي..... (٦ درجات)

٣ – من أمثلة محاصيل الزيتية .....و.....و.....(٦ درجات)

٤- تنقسم محاصيل المكسرات إلى .....و.....و..... (٦ درجات)

٥- يتميز محصول الفول عن غيره من المحاصيل بأنه..... (٦ درجات)

السؤال الثاني: ناقش كلا مما يأتي (٣٠ درجة)

١- خطوات تجهيز التربة للزراعة (١٥ درجة)

٢- استخراج السكر من قصب السكر (١٥ درجة)

السؤال الثالث: قارن بين خصائص التربة الرملية والطينية (١٥ درجة)

السؤال الرابع: أجب واحدا من الأسئلة التالية (١٥ درجة)

١- اذكر ما تعرفه عن استخلاص الزيوت من بذرة الكتان

٢- أذك ما تعرفه عن دباغة الجلود

السؤال الخامس: النباتات الطبية ثروة طبيعية، أذكر أنواع هذه النباتات (١٠ درجات)

أطيب التمنيات بالتوفيق والنجاح

لجنة الممتحنين: أ.د. داليا عبد العظيم أحمد – أ.د. أحمد شرف الدين

لجنة المصححين: أ.د. أحمد شرف الدين - أ.د. داليا عبد العظيم أحمد – د. رانيا الشنودي

	UNIVERSITY OF TANTA, FACULTY OF SCIENCE DEPARTMENT OF BOTANY		
	FINAL EXAMINATION FOR (SENIORES) Third YEAR STUDENTS MICRO. SPECIAAL		
	COURSE TITLE PRINCIPALS OF **Genome changes**	COURSE CODE: Bo 3212	
DATE: 28,MAY, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following questions:

Question 1 Wright shortly on the following with labeled drawings if possible (40 marks):

1) Base excision repair.
2) Mitochondrial genome transcription.
3) How to determine the functions of individual genes.
4) DNA transposones

Question (2) Comlete the following sentences: **(30 marks)**

1) Depurination is .....

3) Missence mutation is .....and nonsense mutation is.....

4) Alkyltransferase is responsible for .....

5) The mutation that decreases the chance of survival and reproduction is called.....

6) Mutation in somatic cells can led to changed .....

7) Chloroplast genome is inherited.... .....

8) There are two classes of transposable elements, ... and .....

9) Spontaneous mutation is .....and induced mutation is .....

10) genome is .....

Question 3 Descuss each of the following : **(30 marks):**

- Homologous recombination repair.
- Causes of mutation.
- Gene location by sequence inspection.

Best Wishes

Dr: Hanan Ibrahim Sayed Ahmed
Dr Adel El Shanshoury

	TANTA UNIVERSITY, FACULTY OF SCIENCE, BOTANY DEPARTMENT			
	FINAL EXAMINATION FOR SOPHOMORES (LEVEL THREE)STUDENTS OF SPECIAL BOTANY			
	COURSETITLE:	MYCOLOGY – PLANT PATHOLOGY		COURSE CODE: MB3232
DATE:28	5 / 2017	TREM: ECOND	TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED: 2 HOURS

Q1- A- Describe the life cycle of Physarum sp. and write the classification.
B- Write on basis for generic separation of Erysiphaceae. **(40 mark)**

Q2- Write on two of the following: **(40mark)**

1- Sexual reproduction in Hemiascomycetes and formation of ascocarp in Discomycetes.
2- Key to classes of Myxomycota and Mastigomycotina.
3- First four stages of the development of the disease on plant.

Q3- A- Describe the following pathogen and write the mechanism by which cause the Disease: **(40mark)**

- *Erwinia carotovora*

B- Illustrate the disease cycle of club – root caused by *Plasmodiophora* sp.

Q4- Complete the following: **(30 mark)**

1- Subdivisions of Eumycota …,…,...,….,…and classes of Zygomycotina…,…,…
2- Symptoms of Ergot disease …,…,… and mechanism of honey dew formation...
3- Homothallic species……and Heterothallic of Rhizopus sp…….
4- Operculate Discomycetes ……and inoperculate Discomycetes……...
5- Symptoms caused to plant by damping off disease ……and methods of controlling…..,……,……
6- Basidiocarpic basidiomycotina…….and non-basidiocarpic basidiomycotina…...
7- Types of ascus wall …….. or …….
8- Apothecium consistes of three parts….,….,….

9-Stages of the disease cycle of Ergot caused by *Claviceps* sp….,….,….
10-Types of sporangia in *Allomyces* sp….,…..and gametothallus consistes from….,…

Examiners: Prof. Dr. Omyma Awadallah

Best wishes ,,,,,,,,,,,,

	Tanta University - Faculty of Science - Botany Department			
كلية العلوم	Examination for 3rd Level Students of Microbiology			TANTA UNIVERSITY
	COURSE TITLE	قضايا بيئية	COURSE CODE BO 3224	
	June 2017	TERM: second	Total Assessment Marks: 100	TIME ALLOWED: 2 HOURS

أجب باختصار عن الأسئلة التالية (١٠درجات لكل سؤال)

الممتحن: دكتور كمال حسين شلتوت

١- مالفرق بين التثبيت الميكانيكى والتثبيت البيولوجى للكثبان الرملية؟

٢- أذكر خمسة من دواعى الحفاظ على التنوع الحيوى؟

٣- ماهى أهم الخطوات التى اتخذتها الجامعات المصرية لتفعيل دورها فى خدمة البيئة والمجتمع؟

٤- كيف تفرق بين الطاقة المتجددة والطاقة غير المتجددة، مع ذكر مثال لكل حالة؟

٥- قارن بين خزانات المياه المتجددة وغير المتجددة فى مصر، مع تحديد أماكن وجود كل منها؟

٦- وضح بإيجاز الغرض من إنشاء المحميات الطبيعية؟

٧- هل تصلح مصر لإنتاج الطاقة من الرياح، ولماذا؟

٨- ناقش هذه العبارة: "تعتبر قضية تخزين الطاقة المتجددة إحدى القضايا المعقدة فى هذا المجال"؟

٩- قارن بين الندى والضباب كمصادر غير تقليدية للمياه؟

١٠- قارن بين السلع والخدمات التى تقدمها الأراضى الرطبة؟

	TANTA UNIVERSITY, FACULTY OF SCIENCE, BOTANY DEPARTMENT			
	FINAL EXAMINATION FOR SOPHOMORES (LEVEL THREE)STUDENTS OF SPECIAL BOTANY			
	COURSETITLE:	MYCOLOGY – PLANT PATHOLOGY		COURSE CODE: MB3232
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	UNIVERSITY OF TANTA, FACULTY OF SCIENCE DEPARTMENT OF BOTANY		
	FINAL EXAMINATION FOR (SENIORES) Third YEAR STUDENTS MICRO. SPECIAAL		
	COURSE TITLE PRINCIPALS OF **Genome changes**	COURSE CODE: Bo 3212	
DATE: 28,MAY, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following questions:

Question 1 Wright shortly on the following with labeled drawings if possible (40 marks):

1) Base excision repair.
2) Mitochondrial genome transcription.
3) How to determine the functions of individual genes.
4) DNA transposones

Question (2) Comlete the following sentences: (30 marks)

1) Depurination is .....

3) Missence mutation is .....and nonsense mutation is.....

4) Alkyltransferase is responsible for .....

5) The mutation that decreases the chance of survival and reproduction is called.....

6) Mutation in somatic cells can led to changed .....

7) Chloroplast genome is inherited.... .....

8) There are two classes of transposable elements, ... and .....

9) Spontaneous mutation is .....and induced mutation is .....

10) genome is .....

Question 3 Descuss each of the following : (30 marks):

- Homologous recombination repair.
- Causes of mutation.
- Gene location by sequence inspection.

Best Wishes

Dr: Hanan Ibrahim Sayed Ahmed
Dr Adel El Shanshoury

	UNIVERSITY OF TANTA, FACULTY OF SCIENCE DEPARTMENT OF BOTANY		
	FINAL EXAMINATION FOR (SENIORES) Third YEAR STUDENTS BOT. SPECIAAL		
	COURSE TITLE PRINCIPALS OF Genome changes	COURSE CODE Bo 3212	
DATE: 1,JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following questions:

Question 1

Wright shortly on the following with labeled drawings if possible (29 marks):

1) Nucleotide excision repair. (8 marks)
2) Mitochondrial genome transcription. (7 marks)
3) How to determine the functions of individual genes. (7 marks)
4) DNA transposones (7 marks)

Question (2)

Comlete the following sentences: **(30 marks, 3 for each sentence))**

1) Oxidation is .....

3) SNP is ....

4) Alkyltransferase is responsible for .....

5) The mutation that increase the chance of survival and reproduction is called.....

6) Exposure to UV light can led to .....

7) Mitochondrial genome is inherited.... .....

8) The two classes of transposable elements are ..... and .....

9) Spontaneous mutation is .....and induced mutation is .....

10) Genome is .....

Question 3

Descuss each of the following : **(26 marks):**

- Non Homologous end joint. (7 marks)
- Causes of mutation. (7 marks)
- Open reading frames. (6 marks)
- Gene overexpression as a way to assess function (6 marks)

Question 4

Circle the right answer: **(15 marks)**

1) Mutation that changes a codon into a stop codon is
   a- Missense mutation
   c- frame shift mutation
   b- Nonsense mutation
   d- neutral mutation
2) Which of the following is an example of somatic mutation
   a- Mutation in an embryonic muscle cell
   c- mutation in an adult nerve cell
   b- Mutation in a sperm cell
   d- Both a and c
3) A point mutation could be caused by
   a- Oxidation
   c- Depurenation
   b- Deamination
   d- All of the above
4) The function of photolayase is to repair
   a- Double strand breaks
   c- thiamine dimers
   b- Apurinic site
   d- all of the above
5) The function of UvrA/UvrB complex is to
   a- Detect DNA damage
   c- remove the damaged DNA piece
   b- Make cuts around the damage
   d- replace the damaged DNA

Best Wishes

Dr: Hanan Ibrahim Sayed Ahmed
Dr Marwa Hamouda

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY			
	Examination for third year of special botany and chemistry/botany			
	COURSETITLE:	Water relations and mineral nutrition		COURSE CODE:
DATE:	JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED:2 HOURS

The following questions are in two pages

Group I. Water relation (75 marks)

1. Write on the following in few words: (15 marks, 5 for each)
   a. Water molecule van der Waals bond
   b. The number of hydrogen bond per water molecule
   c. Interfacial tension of water
2. Complete the following: (20 marks, 5 for each)
   a. Freezing of molal solution occurred at ..... ˚C Instead of 0.0˚C
   b. Kinitic energy of water (K) = ...
   c. The internal pressure is .....
   d. The hydrophobic material is.....
3. Write on **four** of the following: (40 marks, 10 for each)
   a. The mass flow of water.
   b. Water transport from liquid to vapour face
   c. Difference between pressure and diffusion water flow in cells
   d. Amount of water absorbed by the roots
   e. Driving force for water transport in soil-plant-atmosphere continuum

Group II. Mineral Nutrition, Ion transport and Translocation (75 mark)

1. Choose the correct answer and explain? (30 points, 6 for each)

(A) Selectivity of ion transport across membranes and accumulation against concentration gradient is a function of (a)diffusion (b)ATP-dependent transporter (c)Donnan equilibrium.

(B) The mechanism needed to drive active uptake of nutrients against their electrochemical potential is (a)facilitated diffusion (b) primary active transport (c)electrogenic transport.

(C) Sugars entering the apoplast would be actively loaded into the sieve elements by (a) plasmodesmata (b) diffusion (c) energy-driven transporter in the membrane.

باقى الأسئلة خلف الورقة

Prof. Dr. M.N. El-Shourbagy

Prof. Dr. M. A. Abdelhaak

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY			
	Examination for third year of special botany and chemistry/botany			
	COURSETITLE:	Water relations and mineral nutrition		COURSE CODE:
DATE:	JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED:2 HOURS

(D)Leaching of nutrients with drainage water can be decreased by (a) addition of lime (b) addition of P (c) removal of Na.

(E) Sources may include (a) roots (b) a mature leaf producing excess assimilates (c) immature leaves.

2. Distinguish between each of the following: (25 points, 5 for each)

(A) A mobile and immobile element.

(B) Competition and antagonism of elements.

(C) Primary and secondary active transport.

(D) Symporter and antiporter proteins.

(E) Allocation and partitioning of assimilates.

3. Write on each of the following: (20 points, 10 for each)

(A) Evidence supporting active uptake of ions.

(B) Evidence supporting the pressure-flow hypothesis.

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY			
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