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	TANTA UNIVERSITY			
	FACULTY OF SCIENCE			
	DEPARTMENT OF BOTANY			
EXAMINATION for Sophomores (Second Year) students OF BIOLOGY (Special microbiology)				
COURSE TITLE:	Food Microbiology (Theoretical exam)			COURSE CODE: MB2204
DATE: 19 /5/2018	May: 2018	TOTAL ASSESSMENT MARKS: 150	TERM: second	Time allowed: Two hours

Answer the following questions:

1-Write briefly on: (45marks)

- a-Surveillance pyramid for foodborne diseases.
- b- Invasion of *Rhizopus* sp. on eggs and bread.
- c- Factors affecting emergence of foodborne diseases.
- d- Heat treatment as a method of food preservation.



2- Compare between: (55 marks)

- a- Food quality and food safety.
- b- Denaturation and dehydration in food (mention example for each one).
- c- Aflatoxin and Ergot alkaloids.
- d- Botulism and giardiasis.
- e- *S. aureus* and *C. perfringens* food poisoning.

3- Complete: (50 marks)

- a- Food preservation is.....
- b-Norovirus isstranded, While rotavirus is..... stranded.
- c-Contaminated food with *Salmonella* is and
- d- Lecithin is
- e- Contaminated food with *Toxoplasma gondii* isand
- f- is responsible for dates spoilage, While is responsible for tomatoes spoilage.
- g- Foodborne outbreak is.....
- h- Absorption rancidity is.....
- i- Spoilage action of is the destruction of vitamin A in vegetables.
- j- is responsible for strawberries spoilage, While is responsible for pineapple spoilage.

Best wishes.....Examiners
Prof. Dr. Metwally Abd El Azeem
Dr. Nessma El Zawawy

	TANTA UNIVERSITY, FACULTY OF SCIENCE, BOTANY DEPARTMENT			
	Final Examination for Sophomores Students (Special Botany)			
Course title:	PHYCOLOGY		Course Code: BO2204	
DATE: 19 / MAY / 2018	TERM: SECONDS	TOTAL ASSESSMENT MARKS: 150	Time Allowed: 2 hours	

Answer the following questions: -

Question 1- Choose the correct answers for each of the following: -

(30 marks)

- 1 - The life cycle of *Vaucheria* is (haplontic – diplontic- haplobiontic- diplobiontic)
- 2 - The algae with eukaryotic organization belong to the kingdom (protista-plantae - monera - mycota).
- 3 - The alga is an example of heterotrichous habit is (Spirulina- Stigonema – Chroococcus – nothing).
- 4 - Algae means (sea weeds - lichens – archegoniate -. lower plants).
- 5 - The thallus *Nostoc* is (haploid - diploid - diplohaplontic - nothing).
- 6 - Lithophytes growing on (rocks - tree trunk - damp soil - animal).
- 7 - Chrysolaminarin is reserve food of (*Fucus* – *Vaucheria* – *Volvox* – *Spirulina*).
- 8 - Algae live in association with fungi in (plant – archegoniate – lichens – nothing).
- 9 - Euglenophyta is classified as (animals – plants - animals and plants – fungi).
- 10 - In which of the following the daughter cells produced as a result of division are unequal (Chlorophyceae -. Phaeophyceae - Bacillariophyceae - nothing).

Question 2 - Complete with the correct answer of the following: -

(30 marks)

- 1 - Cell wall of Cyanobacteria consists of and
- 2 - Filament of *Nostoc* consists of,..... and
- 3 - The false branching present in while true branching present in.....
- 4 - Heterocysts are present in the members of order..... and
- 5 - Algae reproduce by,..... and
- 6 - The reserve food in *Euglena* is while the storage food in *Nostoc* is
- 7 - The dominant pigment in *Spirulina* iswhile dominant pigment in *Polysiphonia* is.....
- 8 - The order of Diatoms is.....
- 9 - Auxospores formed in during..... to

Question 3:- Write short notes on each of the followings, illustrate with drawings if present:

(15 marks)

a - Compound zoospores formation

b - Haplobiontic life cycle

Question 3: Write short notes about each of the followings, illustrate with drawings if present:

(45 marks)

- 1- Scalariform conjugation in *Spirogyra*.
- 2- General characters of desmids.
- 3- Clump- formation in *Ectocarpus* life cycle.
- 4- The male and female gametophytes in the life cycle of *Laminaria*.
- 5- Features of phylogeny between Cyanophyta and Rhodophyta.
- 6- Palmella stage formation in *Chlamydomonas*.
- 7- Different types of vegetative reproduction in *Chara*.
- 8- The anatomical development in thallus structure of the brown algae.
- 9- *Hydrodictyon* cells can form water nets.

Question 4: Answer the followings:-

(30 marks)

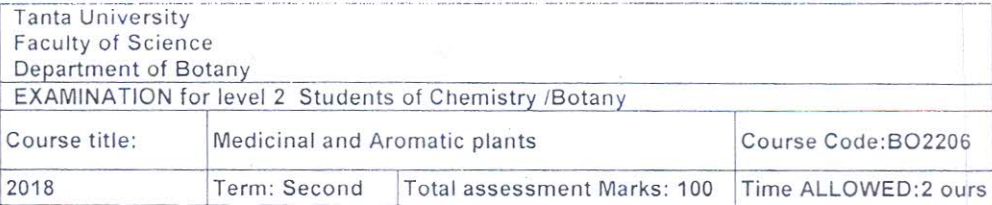
- 1- Define the alternation of generations phenomenon in algae. Illustrate with a complete labeled drawing only the life cycle of *Fucus*. Explain if that phenomenon is present in this life cycle.
- 2- Choose one only from the following Chlorophyta members: *Chlamydomonas*, *Hydrodictyon*, *Ulothrix*, *Cladophora* or *Chara*, then draw its life cycle with a complete labeled drawing.
- 3- Draw a full labeled diagrammatic Scheme of *Polysiphonia* life cycle. What are the different phases of this cycle and its type. (المطلوب مخطط فقط كامل البيانات).

Examiners:

Prof. Dr. Atef Mohamed Abo-Shady

Dr. Gehan Ahmed Ismail

With our best wishes



تحتها خط: (20 درجات)

- 1- يستخرج مادة التوجون من نبات ال Viola odorata..... ()
- 2- يستخرج مادة السنيول من نبات ال Matricaria chamomilla..... ()
- 3- يستخرج مادة سانتونين من نبات ال Papaver somniferum..... ()
- 4- يستخرج مادة الانيثول من نبات ال Colochicum spp..... ()
- 5- يستخرج مادة النيجللون من نبات ال Cannabis sativa..... ()
- 6- يستخرج مادة الخلين من نبات ال Hedeoma spp..... ()
- 7- يستخرج مادة العنصل من نبات ال Salvia afficinalis..... ()
- 8- يستخرج مادة أزولين من نبات ال Eucalyptus spp..... ()
- 9- يستخرج مادة كاتكين من نبات ال Glycorrhiza spp..... ()
- 10- يستخرج سابونين من نبات ال Ocimum asilicum..... ()
- 11- يستخرج الكوديين من نبات ال Papaver somniferum..... ()
- 12- يستخرج الستراميونوم من نبات ال Datura stramonium..... ()
- 13- يستخرج الثاين من نبات ال Punica granatum..... ()
- 14- يستخرج هيوسيامين من نبات ال Hyocymus muticus..... ()
- 15- يستخرج الكافيين من نبات ال Camellia sinensis..... ()

- 1- من فوائد نبات الشمر.....و.....و.....و.....و.....و.....
- 2- يستخدم مادة ليمونين في علاجو.....و.....و.....و.....
- 3- تستخدم في علاج الحصوات وكمدر للبول النباتات.....و.....و.....و.....و.....
- 4- علاج حالات الإمساك يستخدم نبات.....و.....و.....و.....و.....
- 5- من النباتات التي لها تأثير هرموني زكريو.....و.....و.....و.....
- 6- يستخدم كمنشط للقلب نبات.....و.....و.....و.....و.....
- 7- من فوائد نبات الحناءو.....و.....و.....و.....

1- اكتب (في جدول) الاسم الدارج والمادة الفعالة والجزء المستخرج منه المادة الفعالة وثلاث (3) أهمية طبية لكل من النباتات الآتية:- (30 درجة)

2- الفرق بين التجفيف الطبيعي والصناعي. مع ذكر اهمية عملية التجفيف للنباتات الطبية والعطرية. (10 درجة)

3- اذكر خواص القلويدات واهميتها للنبات والانسان. مع ذكر بعض النباتات. (10 درجات)

مع تمنياتي لكم بالتوفيق والنجاح

امتحان الخريف

UNIVERSITY OF TANTA, FACULTY OF SCIENCE DEPARTMENT OF BOTANY			
FINAL EXAMINATION FOR (SOPHOMORES) Second YEAR STUDENTS BOT AND MICRO.			
COURSE TITLE: Principals of Molecular Genetics		COURSE CODE: Bo 2222	
DATE: 2, JUNE, 2018	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following questions

Question 1

(20 Marks 2 for each sentence)

Put R in front of right sentence and w in front of wrong sentence with correction:

- 1- A mutation that enhance the survival and reproduction is deleterious mutation. ()
- 2- IF factors are needed during Elongation stage of translation. ()
- 3- A mutation in a sperm cell is an example of a gametic mutation. ()
- 4- In replication RNA primer is added by endonuclease enzyme. ()
- 5- The conserved elements include, TATA box, CAAT box and the GC box. ()
- 6- B DNA obeys the AT/GC rule whereas Z DNA does not ()
- 7- DNA has phosphate and RNA does not ()
- 8- Splicing is part of RNA modifications ()
- 9- DNA lagging strand is made in the direction 3-5 and is made as Okazaki fragments ()
- 10- The genetic code is the binding of tRNA to mRNA ()

Question (2):

(25 marks)

Discuss each of the following with labeled drawings if possible :

- 1- Differences between DNA replication and RNA transcription. (5 marks)
- 2- Beneficial mutations. (5marks)
- 3- Base excision repair. (5marks)
- 4- Polypeptide chain elongation. (5marks)
- 5- Protein folding. (5 marks)



Question (3):

(30 marks 3 for each sentence)

Complete the following sentences:

- 1) Degeneracy is, however, wobble is.....
- 2) Chaperones is and responsible for
- 3) Shine-Dalgarno sequence isand it is important for.....
- 4) Nuclear localization sequence is
- 5) Transcription unit is
- 6) snRNA is
- 7) RNA polymerase II is responsible for
- 8) Lagging strand is
- 9) Sigma factor isand it is responsible for
- 10) The topoisomerase enzyme is responsible for

Question(2):


(25 Marks)

Write shortly on each of the following:

- 1- Bacterial DNA replication. (5 marks)
- 2- RNA processing. (5 marks)
- 3- Mismatch repair. (5 marks)
- 4- Meselson and Stahl experiment. (5 marks)
- 5- Ubiquitin-proteasome pathway. (5 marks)

Best wishes

*Dr: Hanan I Saged Ahmed
Dr Marwa hamouda*

	Tanta University Faculty of Science Department of Botany			
	EXAMINATION for level 2 Students of Chemistry /Microbiology			
Date:19/5	2018	Term: Second	Total assessment Marks: 50	Course Code: BO 2240 Time ALLOWED:2 ours

النظام البيئي

السؤال الأول:- (20 درجة)

- أ- ضع علامة (√) و (X) أمام العبارات التالية مع تصحيح الخطأ إن وجد: (10 درجات) كل فقرة ب 2 درجة
- 1- التوزيع المنتظم للجماعة يحدث بشكل تلقائي في الطبيعة..... ()
 - 2- وجود أعداد متباينة من الأفراد حديثة العمر يدل على أن الجماعة ذات نمو سريع..... ()
 - 3- الدبال يعمل على تحويل المادة الغير عضوية الى الصورة العضوية..... ()
 - 4- يعتبر سريان الطاقة ودوران العناصر من الدراسات البيئية المتطورة..... ()
 - 5- معدل ايض المنتجات الأرضية بالنسبة لوحدة الكثافة العددية أقل من المنتجات المائية..... ()
 - 6- السلسلة الغذائية الرعوية عبارة عن التتابع الاستهلاكي للمراعي من خلال مراحل انتقالها بين الكائنات الحية..... ()
 - 7- المنتجات الأولية تحول المادة من صورتها العضوية المعقدة إلى الغير عضوية البسيطة..... ()
 - 8- تماثل الموارد الطبيعية في الموطن البيئي ينتج ما يسمى بالتكتل المنتظم..... ()
 - 9- الإنتاج الأولي الصافي هو كمية المادة العضوية وغير العضوية المكتسبة من عمليتي البناء الضوئي والتنفس..... ()
 - 10- ينشأ التنافس عندما تكون العوامل البيئية الضرورية كافية..... ()

ب- عرف ما يأتي: (10 درجات) كل فقرة ب 2 درجة

Age structure – Allelopathic substances – Carrying capacity – Humus – Ecological Efficiency

السؤال الثاني:- (10 درجة)

- أ- أكمل:- (10 درجات) كل فقرة ب 2 درجة
- 1- الكثافة الخام هي..... بينما الكثافة البيئية هي.....
 - 2- تبدأ السلسلة الغذائية النثرية ب..... وتنتهي ب.....
 - 3- الغلاف الجوي هو..... بينما المحيط الحيوي هو.....
 - 4- تعرف الجماعة ب..... بينما المجتمع ب.....
 - 5- مكونات النظام البيئي..... و..... و.....

السؤال الثالث: (20 درجة)


قارن بين كل مما يأتي: (بالرسم فقط والبيانات) كل فقرة ب 5 درجات

- 1- مسري الطاقة في النموذج ذات الشعبة الواحدة وذو الشعبتين.
- 2- السلسلة الغذائية الرعوية والنثرية.
- 3- منحنى النمو الآسي والسيجمويدي من نمو الجماعة.
- 4- دورة عناصر رسوبية وغازية.

انتهت الأسئلة

أساتذة المادة: أ.د. محمد البحيري

C

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY			
	EXAMINATION FOR SOPHOMORES STUDENTS			
	COURSE TITLE:	PLANT ANATOMY		COURSE CODE: BO2206
DATE:	21-5-2018	TERM: SECOND	TOTAL ASSESSMENT MARKS:150	TIME ALLOWED: 2 HOURS

Write on each of the following: (65 mark)

- 1- Periderm
- 2-Functions of the cell wall
- 3-Hydathodes
- 4-Xerophytes
- 5-Tyloses

Draw each of the following: (65 mark)

- 1-Types of sclerenchyma cells
- 2-Simple and bordered pits
- 3- Lenticel
- 4- Secondary thickening in monocotyledons (Dracaena)
- 5-Shape of parenchyma cells

Put √ or x: (20 mark)

- 1-Collenchyma in which the thickening of the cell wall is in the angles is called lamellar Collenchyma ()
- 2-Spring wood develops wide elements and large amount of parenchyma ()
- 3-Lignin in the cell wall is composed mainly from phenolics ()
- 4-When a pit is opposite to an intercellular space it is termed a blind pit ()
- 5-Lateral meristems are found in the bases of the internodes as grasses ()
- 6-Phellogen is a secondary meristem ()
- 7-The end walls of tracheids are perforated ()
- 8-Nectaries occur on flowers and on vegetative parts ()
- 9-In the transverse section tracheids are usually circular ()
- 10-The protoderm develops the rhizodermis with its root hairs ()

Best wishes

Dr Shaimaa Abd El-Hameed



TANTA UNIVERSITY
FACULTY OF SCIENCE
BOTANY DEPARTMENT



امتحان الفصل الدراسي الثاني للمستوى الثاني نبات خاص

Course Title:	Economic Botany	Course Code: Bo 2208
May 26, 2018	Term: Second	Total assessment marks: 100
		Time Allowed: 2hour

Q1: Complete the following with suitable words (30 marks)

- 1- Carbohydrates are defined as.....(5 marks)
- 2- Tannins derived from fruits as in..... (5 marks)
- 3- Resins are complex substances derived from (5 marks)
- 4- The fatty oils differ from essential oils in being and (5 marks)
- 5- Shearing Strength of wood is (5 marks)
- 6- Blue dyes were obtained from..... (5 marks)

Q2: Put True (T) or False (F) with correction of wrong sentences (30 marks)

- 1- Waxes consist of glycerin in combination with a fatty acid () (5 marks)
- 2- All drug plants are medicinal plants. () (5 marks)
- 3- Kapok tree was an ideal source for filling fibers () (5 marks)
- 4- pyrethrum insecticide is derived from roots () (5 marks)
- 5- Tannins are all the coloring materials that occur in plants and are manufactured by the plant itself () (5 marks)
- 6- Organic acids are widely distributed in plants, especially in fruits and vegetables () (5 marks)

Q3: Discus in details: (20 marks)

- 1- The cotton industry steps (10 marks)
- 2- Classes of vegetable fatty oils (10 marks)

Q4: Answer only one Group (20 marks)

- Group 1:** 1- Stages of Sugar extraction from sugarcane (10 marks)
2- Factors influence the mechanical properties of wood (10 marks)

OR

- Group 2:** 1- Chemical processes of paper making (10 marks)
2- Using of Tannins in tanning animal leathers (10 marks)

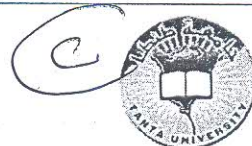
With my best wishes

لجنة الممتحنين: أ.د. داليا عبد العظيم أحمد – د. رجب الفحار

لجنة المصححين: أ.د. داليا عبد العظيم أحمد – د. رجب الفحار – أ.د. شيماء الشافعي – أ.د. حنان مبارك



Tanta University
Faculty of Science
Botany Department



Theoretical exam.	Assessment = 150 marks.	Time allowed: 2 hours.
Course Title: Mycology.	Course code: MB2220.	
Chemistry/ Microbiology program.	Academic year: 2017/2018.	
Juniors (Level: 2 – Semester: 2)	16 May 2018.	

Part (1) 75 Marks

(1) Discuss in detail:

(40 marks)

1. Draw the life cycle of *Physarum* and discuss the steps in this life cycle in detail.
2. The life cycle of *Euellomyces*.
3. Proliferation.
4. Genera of family Peronosporaceae.

(2) Complete the following:

(30 marks)

1. General character of fungi 1-.....2-.....
2. Nutrition in fungi.....&.....
3. Importance of fungi to man 1.....2.....3.....
4. Types of reproduction in fungi 1.....2.....
5. Plasmogamy means.....
6. Plasmodium is.....
7. Diplantism is.....
8. Families of order peronosporales are 1.....2.....3.....
9. *Rhizopus stolonifera* is used commercially for manufacture of.....and.....
10. Entomophthorales includes fungi which are chiefly parasitic on.....

Part (2) 75 Marks

(3) Put ☒ or ☐ in front of the following sentences then correct the false sentences: (20 marks)

1. Taphrinales produce no sex organs.
2. Family Sclerotiniaceae is from epigeal operculate discomycetes.
3. When the teleutospores of *Puccinia graminis* germinate, they give pycnia.
4. The cleistothecial appendages of *Phyllactinia* are with coiled tips.
5. The subdivision fungi imperfecti lacking the asexual reproduction.
6. The asci in order Erysiphales forming basal arranged layer inside the cleistothecium at maturity.
7. The toadstools and stinkhorns are from Basidiomycotina.
8. The basidiocarp of Hymenomycetes is gymnocarpous or semiangiocarpous.
9. In *Phyllactinia*, the mycelium is entirely endophytic.
10. The discovered perfect stages of deuteromycotina are belong to zygomycotina.

(4) A. Give the definition of the following:

(20 marks)

- Angiocarpous basidiocarp
- Perithecium
- Gleba

باقى الأسئلة خلف الصفحة

- Hypogean discomycetes.
- Oidia

B. Compare briefly without drawing between *Erysiphe*, *Levillula* and *Phyllactinia* (10 marks)



(5) Complete the sentence:

(25 marks)

1. The conidia of *Erysiphe* are formed together in.....while that of *levillula* are.....
2. The genus *Aspergillus* is belonging to subdivision.....its fruiting bodies are.....
3. The apothecium of the order Tuberales is.....while of Pezizales is.....
4. In order Moniliales the hyphae are.....&they are.....or.....colored.
5. In Polyporaceae, the basidia line the inner surface of.....Also, the fruiting bodies resemble.....&.....
6. Earthstars are puffballs in which thesplit along radial fissures and when wet open out in the form of.....
7. Basidiomycotina are classified to two classes.....andwhere the sexual spores are.....which produced on.....
8. *Puccinia graminis* causes.....disease and form five spores in its life cycle, they are 1.....2.....3.....4.....5.....

مع أطيب التمنيات بالتوفيق

د. حنان مبارك & د. سماح الديبكي

	BOTANY DEPARTMENT - TANTA UNIVERSITY - FACULTY OF SCIENCE				
	FINAL EXAMINATION / SECOND YEAR SPECIAL BOTANY				
	Course Title:	PLANT TAXONOMY		Course Code: BO2206	
9 June 2018		Term: Second	Total assessment marks: 150	Time Allowed: 2 hours	

WITH LABELLED DRAWINGS ANSWER THE FOLLOWING QUESTIONS

Question A: Write on each of the following:

(50 Marks)

1. Types of determinate inflorescences.
2. Ontogeny of anthers.
3. Differences between monocot and dicot plants.

Question B: Identify each of the following:

(50 Marks)

1. Diadynamous and Tetradynamous.
2. Monadelphous stamens.
3. Double fertilization.
4. Clone pollination.

Question C: Compare between each of the following:

(50 Marks)

1. Families of order Graminales and Cyperales.
2. Families of Liliiflorae.
3. Subfamilies of family Leguminosae.
4. Families of order Geraniales.

Examiners:

With our best wishes

Prof. Dr. Adel Elshanshory

Prof. Dr. Reda Gaafar



Tanta University
Faculty of Science
Botany Department



Theoretical exam.	Assessment = 150 marks.	Time allowed: 2 hours.
Course Title: Mycology.		Course code: MB2220.
Chemistry/ Microbiology program.		Academic year: 2017/2018.
Juniors (Level: 2 – Semester: 2)		16 May 2018.

Part (1) 75 Marks

(1) Discuss in detail:

(40 marks)

1. Draw the life cycle of *Physarum* and discuss the steps in this life cycle in detail.
2. The life cycle of *Eurotium*.
3. Proliferation.
4. Genera of family Peronosporaceae.

(2) Complete the following:

(30 marks)

1. General character of fungi 1-.....2-.....
2. Nutrition in fungi.....&.....
3. Importance of fungi to man 1.....2.....3.....
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6. Plasmodium is.....
7. Diplanetism is.....
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باقى الأسئلة خلف الصفحة

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B. Compare briefly without drawing between *Erysiphe*, *Levillula* and *Phyllactinia* (10 marks)



(5) Complete the sentence:

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د. حنان مبارك & د. سماح الديبكي

	BOTANY DEPARTMENT - TANTA UNIVERSITY - FACULTY OF SCIENCE				
	FINAL EXAMINATION / SECOND YEAR SPECIAL BOTANY				
	Course Title:	PLANT TAXONOMY		Course Code: BO2206	
9 June 2018	Term: Second	Total assessment marks: 150	Time Allowed: 2 hours		

WITH LABELLED DRAWINGS ANSWER THE FOLLOWING QUESTIONS

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(50 Marks)

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3. Differences between monocot and dicot plants.

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1. Diadynamous and Tetradynamous.
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Question C: Compare between each of the following:

(50 Marks)



1. Families of order Graminales and Cyperales.
2. Families of Liliflorae.
3. Subfamilies of family Leguminosae.
4. Families of order Geraniales.

Examiners:

With our best wishes

Prof. Dr. Adel Elshanshory

Prof. Dr. Reda Gaafar

	TANTA UNIVERSITY, FACULTY OF SCIENCE, BOTANY DEPARTMENT			
	Final Examination for second level Students (Special Microbiology)			
Course title:	WATER MICROBIOLOGY		Course Code: MB2206	
DATE: 9, JUNE, 2018	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	Time Allowed: 2 hours	

Answer the following questions:

Q1: Complete the following:

(40 MARKS)

(Each space with 2 MARKS)

- 1- A common example of Non point source pollution is
- 2- Anaerobic bacteria convert nitrate to atmospheric nitrogen gas is called This process is known as process.
- 3- Chlorine residual is defined as
- 4- Factors affecting self purification of water such as : dilution , current , and
- 5- Pathogenic viruses in water include
- 6- Water based diseases such as while water related insect vectors such as And water washed diseases such as Infections.
- 7- Amount of bleach required for 1 quart bottle is
- 8- Aerobic bacteria that make removal of phosphates from waste water, it is called
- 9- One of the most common illnesses associated with bacterial pathogens in seafood is due to the production of
- 10- Sulfur oxidizing bacteria convert into and producing that can clog plumbing.
- 11- COD measurements can be made in while BOD measurements take

See next page

تابع الأسئلة في الخلف

Q2: Write short notes on Only Five of the following: (30 MARKS)

- 1- Fungal pathogens in seafood. (6 MARKS)
- 2- Steps of drinking water treatment process. (6 MARKS)
- 3- Human activities and water pollution (only three examples). (6 MARKS)
- 4- Iron and sulphur bacteria can create problems. (6 MARKS)
- 5- Reaction of chlorine in water. (6 MARKS)
- 6- Biofilm in pipes. (6 MARKS)

Q3: Give reason(s) for ONLY THREE of the following: (15 MARKS)

- 1- Removal of ammonium nitrates is quite complex. (5 MARKS)
- 2- Coliform bacteria are good indicators. (5 MARKS)
- 3- Less oxygen dissolves in warm water than cold water. (5 MARKS)
- 4- Possibility of fungal infections. (5 MARKS)

Q4: Explain: (5 MARKS)

- 1- How to treat drinking water by reverse osmosis. (5 MARKS)

Q5: Mention with drawing (if possible): (10 MARKS)

- 1- Confirmed test for coliform bacteria. (5 MARKS)
- 2- The classical water borne infection cycle. (5 MARKS)


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Best wishes

Examiner

Dr. Maha Mahmoud Azab

Examination for 2nd level Students of Botany / Microbiology

COURSE TITLE	Crops		COURSE CODE BO2110	
May 2018	TERM: Second	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS	

أولاً: ضع علامة (✓) أو (X) مع تصحيح الخطأ إن وجد: (١٥ درجة)

١. نشأ محصول الحشيش في مركز جنوب أمريكا.
٢. يؤدي إرتفاع حرارة التربة إلى سرعة إنقسام خلايا الجذور و إستطالتها.
٣. تتكون الجذور الليلية من جذر رئيسي و جذور ثانوية.
٤. يتم زراعة قصب السكر بين خطوط القطن.
٥. محصول بنجر السكر من المحاصيل المحبة للحرارة.

ثانياً: أكمل الفراغات بالعبارات المناسبة: (٢٥ درجة)

١. خصائص مركز نشوء المحاصيل هي و و
٢. تؤدي ظروف التهوية السيئة بالتربة إلى و و
٣. شروط تحقيق عملية الإرتباع هي و و
٤. تساعد الرياح على إنتشار بذور الحشائش لأنها و
٥. أساس عمل المبيدات الإختيارية هو

ثالثاً: أختار الإجابة الصحيحة من بين الأقواس (١٠ درجة)



١. يتم إضافة (الجبس - الجير - الأسمدة) لتحسين بناء التربة الطينية.
٢. تنتشر الأراضي القلوية في المناطق (الإستوائية - الجافة - الباردة).
٣. تصبح التربة قلوية نتيجة تزايد (الصوديوم - الكالسيوم - المنجنيز).
٤. تجود زراعة المحاصيل المتعمقة الجذور في الأراضي (الطينية-الرملية-الجيرية).
٥. يعتبر نبات اليانسون من النباتات (الطبية - الزيتية - البقولية).

رابعاً: أكتب ما تعرفه عن: (٥٠ درجة)

١. الضوء و نمو المحاصيل.
٢. تأثير الحموضة على نمو المحاصيل.
٣. طرق إنتشار الحشائش.
٤. مواصفات التقاوى الجيدة.
٥. فوائد الدورات الزراعية.

أستاذ المادة

د. رجب أحمد الفجار
أطبيب الأمنيات بالتوفيق و النجاح

	Tanta UNIVERSITY, Faculty of Science, Department of Botany			
	Final Examination for (2nd Year) Students of Chemitry/Microbiology			
	Course Title: VIROLOGY		Course Code: MB2222	
Date: May 21, 2018		Second Semester	Total Assessment Marks: 100	Allowed Time: 2 Hours

I. Define each of the following:

(20 Marks)

1. Capsomere.
2. Icosahedral symmetry.
3. Laboratory strain of a virus.
4. Latent infection.
5. Reverse transcriptase.
6. Negative nucleic acid strand.
7. Plaque forming unit.

II. Briefly discuss the molecular events that govern the decision between lytic cycle and lysogeny in phage lamda.

(20 Marks)

III. Compare between the following terms:

(20 Marks)

1. Segmented and polycistronic genomes.
2. The entry of M13 phage and the entry of Tobacco mosaic virus.
3. Structural and non-structural proteins.
4. Reassortment and break-rejoin genetic recombination.
5. Virulent and temperate phages.



IV. Answer the following Questions:

(40 Marks)

1. Illustrate the variety of virus genomes transcription and translation. **(10 Marks)**
2. Outline the properties of tobacco mosaic virus different proteins. **(10 Marks)**
3. Describe the genome organization of *Influenza virus A*. **(10 Marks)**
4. Outline methods for purification of viruses by centrifugation. **(10 Marks)**

All the best
The Examiner:
Dr. Mohammed Ali Eid

G

	Tanta UNIVERSITY, Faculty of Science, Department of Botany			
	Final Examination for (Second Year) Students of Chemistry/Biochemistry and special Biochemistry.			
	Course Title: General Microbiology		Course Code: MB2240	
Date: May 16, 2018		Second Semester	Total Assessment Marks: 150	Allowed Time: 2 Hours

Part I: (75 Marks)

I. Define each of the following:

(20 Marks)

1. Glycocalyxes.
2. Peritrichous bacterial cell.
3. Teichoic acid.
4. Cyanobacteria.
5. Tactic behavior.
6. Outer membrane
7. Periplasmic space

II. Describe with a labeled diagram and in words: the fluid mosaic model for bacteria cell membranes.
(15 Marks)

III. Answer the following Questions:

(40 Marks)

1. Compare between fimbriae and sex pili, and give the function of each. (5 Marks)
2. Discuss the ways in which bacteria are classified based on their requirements for energy. (10 Marks)
3. Describe the structure of the bacterial endospore using a labeled diagram. (5 Marks).
4. Discuss the following with labeled drawing: flagella structure, and the way in which flagella operate to move a bacterium. (10 marks).
5. Describe the effect of oxygen on the growth of various types of bacteria. (10 marks)

Part II: (75 marks)

I. Fill in the spaces and/or enumerate of the following:

(15 marks)

1.are produced as a result of sexual reproduction of Basidiomycetes.
2. Harmful role of fungi are a).....b).....
3. Isogametes mean.....
4. Pseudomycellium means.....
5. Vegetative reproduction is

II. Define each of the following:

(15 marks)

1. Rhizoplane.
2. Myxomycota.
3. Phytogenic fungi.

III. Write briefly on the following with labeled drawing:

(45 marks)

1. Ascocarps (3 only).
2. Asexual reproduction of *Albugo*.
3. Steps of sexual reproduction in fungi.
4. Types of fungal spores.
5. Life cycle of *Taphrina deformans* (Haplophase only)



All the best

The Examiner:

Prof. Dr. Metwally Abd ElAzeem.

Dr. Mohammed Ali Eid

C

 1969	TANTA UNIVERSITY FACULTY OF SCIENCE BOTANY DEPARTMENT			
Examination / FOR FOR LEVEL 2 TH BIOPHYSICS				
Course Title:	Plant Diseases caused by Microorganisms,Insects and Nematode			Course Code:BO 2240
19-May - 2018	Term: Second	Total assessment marks: 150		Time Allowed: 2 hours

Answer the following questions

First part : (75 Marks)

First question: Complete the following Sentences : (15 Marks)

A-Plant diseases causing by non biotic agents are,,,

B-Symptoms associated with hyperplasia are,,,

C-Fungi divide into two main division :Division and Division

D-Steps in the development of the disease on host plant are:,,

.....,,,,,

Second question: Explain and draw life cycle of : (30 Marks)

A- *Plasmopara viticola*.

B- *Plasmodiophora brassicae*

Third question: Discuss symptoms and how to control the following diseases with mention name of the causal organisms: (30 Marks)

a-Black rust of wheat plant disease, drawing only stages on wheat plant disease.

B-Peach leaf curl disease, drawing the final stage only .

Second part : (75 Marks)

Fourth question: Answer the following : (50 Marks)

a- Discuss the symptoms and causal microorganism of bacterial soft rots of vegetables.

b- Talk briefly about symptoms of Crown Gall disease .

c- what are symptoms of Sugar-cane mosaic diseases .

d- How can we control disease caused by *Aphelenchoides besseyi* .

Fifth question: Complete the following sentences : (25 Marks)

1- Bacterial wilt disease symptoms are

2- Bacterial blight spread in,,conditions .

3- Bacterial.....disease caused by *Clavibacter michiganensis*.

4 - Yellow dwarf of onion disease caused by virus

With best wishes

Prof.Dr. Susan Assawah & Prof.Dr.Eman Abd-El-Zaher

