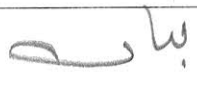
	Tanta UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY			
	EXAMINATION for Seniors ( <u>Fourth Level</u> ) students of <u>Special Botany</u>			
	COURSE TITLE:	Nitrogen Metabolism		COURSE CODE: BO 4218
DATE: 17/6/2015	JUNE, 2015	<u>FINAL EXAM</u>	MARKS: 100	TIME: 2 HOURS.

I- Define each of the following (20 Marks)

- a- Globulins and Glutelins                      b- Gel filtration  
 c- Atmospheric deposition                      d-  $\beta$ -helix structure of protein



II- Complete the following (30 Marks)

- 1- The effects of the anoxic conditions on nitrate absorption are ..... (6 Marks)  
 2- The charges on the amino acids are important because ..... (6 Marks)  
 3- The toxicity of ammonium is due to ..... (6 Marks)  
 4- The key factor in the nitrification process is.....because..... (6 Marks)  
 5- The charges on the amino acids are important due to ..... (6 Marks)

III- Write on the following (50 Marks)

- 1- Absorption of nitrate and ammonia (10 Marks)  
 2- The disadvantages of nitrate and ammonium nutrition (10 Marks)  
 3- Classification of amino acids and their biosynthesis by transamination (10 Marks)  
 4- The main pathway of ammonium and nitrate assimilation (10 Marks)  
 5- Classify the protein on the basis of a- function b- structure c- shape (10 Marks)

EXAMINER	PROF.DR./ WEDAD ABD EL-AZIZ KASIM
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	TANTA UNIVERSITY, FACULTY OF SCIENCE, DEPARTMENT OF BOTANY			
	EXAMINATION FOR FRESHMEN (FOURTH YEAR) STUDENTS OF BOTANY			
COURSE TITLE:	ECONOMIC USES OF ALGAE		COURSE CODE: BO4210	
DATE: 8/6/2015	JUNE, 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

**I - Choose the correct answer:-**

**(20 Marks)**

- 1- Kombu is the Japanese name for the dried seaweed that is derived from a Mixture of .....  
a) *Jania* sp.                      b) *Laminaria* sp.                      c) *Ulva* sp.                      d) *Porphyra* sp.
- 2 -The low quality agar is used in .....  
a) Food product                      b) culture media                      c) electrophoresis                      d) a+b
- 3-The algae harvested from treatment ponds are widely used in.....  
a) Nitrogen and phosphorus supplement                      b) Agriculture purpose                      c) Biodiesel                      d) All
- 4-Halogenated compounds are produced naturally mainly by marine .....  
a) Red algae                      b) green algae                      c) Brown algae                      d) a+c
- 5- In making biodiesel, transesterification is catalyzed by .....  
a) acids                      b) alkalis                      c) lipase enzyme                      d) All previous
- 6- The most highly purified agar called.....  
a) Agarophytes                      b) Agaropictin                      c) Agarose                      d) None
- 7- Natural algaecides could effectively be applied in .....  
a) Water treatment                      b) algalization                      c) control of toxic algal blooms                      d) a+b
- 8- The anti-HSV factor from *Dunaliella* sp. inactivates the viral function at .....  
a) Stage II                      b) Stage III                      c) a+b                      d) Stage I
- 9- The metal ions are adsorbed over the cell surface very quickly just in a few seconds or minutes; this process is called.....  
a) chemisorptions                      b) Rapid uptake                      c) Adsorption                      d) All previous
- 10-The Soil microorganisms commonly aggregate soil particles to form .....  
a) Organic matter                      b) Soil crust                      c) Soil algae                      d) a+c



**II- Put sign (✓) front the correct answer and sign (X) front the wrong answer and correct the wrong answer:-**

**(20 marks)**

- 1 - Fertilizers only supply nutrient to the soil but soil conditioner enhances the physical, chemical and biological health of soil. (      ).
- 2 - Algae cannot directly produce HUFAs such as arachidonic acid (ARA, 20:4n-6) like terrestrial crops. (      ).
- 3 - Agar are more widely used than Carrageenans as emulsers/ stabilizers in numerous foods, especially milk-based products. (      ).
- 4- Artificial diets have natural sources of pigments that give organisms such as salmon their coloration (      ).
- 5- Laminarin is one of the major polysaccharides found in red algae with antiviral and antibacterial properties (      ).
- 6- Alginate made up of mannuronic acid and guluronic acid and extracted from Phaeophyceae (      ).

من فضلك انظر خلف الصفحة

بنا

 كلية العلوم	Tanta University - Faculty of Science - Botany Department			
	Examination for 4 <sup>th</sup> Level Students of Botany			
	COURSE TITLE	إدارة البيئة ودراسات الجدوى البيئية	COURSE CODE	
June 2015	TERM: second	Total Assessment Marks: 100	TIME ALLOWED: 2 HOURS	

السؤال الأول (25 درجة)

- 1- عرف عملية تقييم الأثر البيئي؟
- 2- ماهي أهم فوائد تقييم الأثر البيئي؟
- 3- وضح الفرق بين مجموعات المشروعات من الفئات أ، ب، ج؟
- 4- أعط مثال لإحدى الصناعات البترولية التي تنتمي لكل من القوائم أ، ب، ج؟
- 5- ما المقصود بإجراءات التخفيف التي يجب أن يشتمل عليها تقرير تقييم الأثر البيئي؟

السؤال الثاني (25 درجة): عرف كل مما يلي:

1- نظام الإدارة البيئية؟

2- الآثار البيئية؟

3- الأداء البيئي؟

4- مؤشر الحالة البيئية؟

5- خطة الإدارة البيئية؟

السؤال الثالث (25 درجة)

أشرح باختصار محتويات دراسة تقييم الأثر البيئي؟

السؤال الرابع (25 درجة)

التنوع الحيوي الطبيعي (النباتات والحيوانات والكانتلت الدقيقة) هو جزء هام من الثروة الطبيعية لأي بلد، وضح كيف يمكن الحفاظ عليه من خلال دراسات تقييم الأثر البيئي؟

الممتحن: ا. د. كمال شلتوت

**4- Choose one answer:-**

**(30 mark)**

a- Psychrophilic fungi can grow over the range 20-50°C (maximum 58°C) with optima above 40°C.

**True False**

b- Mutation : The change that would occur in the genetic materials as a result of exposure to extreme condition.

**True False**

c- Turbidimetric method considers way to culturing fungi

**True False**

d- There are only two degree of requirements for fungal growth, Minimum requirements and Maximum requirements

**True False**

e- Lyophilization is preservation of fungi by drying under vacuum from the frozen state by sublimation of ice.

**True False**

f- The chemical composition of the wall differs greatly between taxonomic groups of fungi.

**True False**

g- Autolysis this means, the cells of organism is dying due to the toxic compounds that appear in the media.

**True False**

h- In stationary phase the number of fungal cells is in maximum.

**True False**

i- polysaccharides appear to play a decisive role in wilt diseases of vascular plants.

**True False**

j- A pronounced fall in pH of ammonium nitrate medium during the growth of fungi is common.

**True False**

**With our best wishes**

**Prof. Dr. Alaa Mostafa Abou-Zeid- Prof. Dr. Mahmoud Abo-El-Yazed-**

**Dr. Jehan Esmail**

