

Mansoura University  
Faculty of Science  
Department of Zoology



Date: 27 Dece. 2014  
Time : 2 hours  
Full Mark: 60

Final examination in Environmental Physiology (Z401)  
Level 4 students,

Answer (All ) the following Questions

(60 marks)

1- Describe the annual cycle (stages) of black bear activity of hibernation. ....(10 marks)

2- Answer the following questions. ....(20 marks)

- a. Sketch the exchange of salt (NaCl) and water between a marine fish and its environment
- b. Compare how membrane structures in the loop of Henle and collecting duct of the mammalian kidney enable water to be recovered from filtrate in the process of osmoregulation.

3-a- Compare between physical and behavioral adaptation with examples. (10marks)

b- Define Fick's Law in O<sub>2</sub> diffusion.

4- Write short notes on the following:.....(20 marks)

- a- The fish counter current system
- b- Indicate the adaptation of some animals to get their oxygen

Mansoura University  
Faculty of Science  
Zoology Department  
First term- Final exam  
Subject: Marine Ecology and  
Environ. Pollution (Es 403)



2114/2015

Third year- Environmental Sci.

Date: 30 December 2014

Time Allowed: 2hr

Total mark: 80 degree

**Answer all the following questions**

**Question One:**

(20 degree)

A- In your opinion what is the most effective component of the climate on the living things?

B- Write briefly on:

- 1- Marine ecology.      2- The value of marine ecosystem.

**Question Two:** Write short notes on the following:

(20 degree)

A- Oil spills.

B- Surf zone.

C- Overfishing.

D- Pollution of oceans by heavy metals.

**Question Three:**

(20 degree)

A- Compare between Organismal ecology and Ecosystem ecology.

B- Compare between primary producers and primary consumers.

C- Compare between regulators and conformers.

D- Compare between photic zone and aphotic zone.

**Question Four:**

(20 degree)

Write short notes on:

1- Coral reefs and the causes of their destruction.

2- Benthic fauna.

With best wishes of success,

**Dr. Sherif Ramadan**

Mansoura University  
Faculty of Science  
Botany Department  
El-Mansoura, Egypt



جامعة المنصورة  
كلية العلوم  
قسم النبات  
المنصورة - مصر

**Final Examination in Botany  
First Term: Jan. 2015**

**Educational Year: Fourth Level**

**Program (Branch): Environmental sciences**

**Subject: Bot (422)**

**Course: Waste management and environmental diseases**

**Time: 2 hrs**

**Date: 17/1/2015**

**Full mark: 60**

**Question mark: 20**

**Answer the following questions:**

**Q1: A) - Complete the following:- (10 M)**

- 1- If waste not managed wisely, it affects.....
- 2- Waste hierarchy refers to.....
- 3- ..... are disposal methods for municipal solid waste.

**B) – Define each of the following:- (10 M)**

- Environmental diseases — Corrosive waste – Landfills  
Solid waste – Incineration process.

**Q2: 1- What should be done to manage waste? Support answer with your proposals. (7 M)**

2- The state efforts moving toward recycling the house hold wastes to compost. Describe composting process. (7 M)

3- What must be careful in storage of hazardous waste? (6 M)

**Q3: A- Diagram bioreactor landfills explaining its components and types. (9 M)**

**B- Write on:**

1- Leachate collection system. (6 M)

2- Vessel-borne disease. (5 M)

**Examiners:**

**Dr. Ghada El Sherbeny**

**Dr. Mohamed Abd Elaal**



إمتحان نهائى ( دور يناير ٢٠١٥ )  
المستوى: الرابع برنامج: علوم البيئة  
المادة: جيولوجيا بيئية  
الورقة الإمتحانية: ج ١٧  
الدرجة الكلية: ٦٠ درجة  
تاريخ الإمتحان ٢٠ / ١ / ٢٠١٥

### أجب عن الأسئلة الآتية :

السؤال الأول : أذكر السبب: (٢٠ درجة)

- ١- وجود الماء على كوكب الأرض فى الحالة السائلة كشرط ضرورى للحياة والنظم البيئية.
- ٢- سهولة تحرك الألواح التى تحمل فوقها القارات والمحيطات.
- ٣- مشكلة ثقب الأوزون وتكون الأمطار الحامضية.
- ٤- مصادر التلوث البيئى.
- ٥- الأرض هى الموطن المناسب والوحيد لعيش الإنسان وموارده محدودة.

السؤال الثانى: أكتب بإختصار عن الآتى:- (٢٠ درجة)

١. أهمية الغلاف الهوائى لسطح الأرض .
٢. المكونات الكيميائية والطبقية للغلاف الهوائى للأرض .
٣. الأرض نظام مغلق.
٤. الأشكال الأرضية الناتجة من عمل الأنشطة الطبيعية الخارجية على سطح الأرض.


السؤال الثالث: أكمل الجمل الآتية: (٢٠ درجة)

- ١- الكواكب البعيدة عن الشمس تمتاز بكثرة غاز .....
- ٢- النشاط البركانى مد سطح الأرض فى العهود الأولى .....
- ٣- يعمل .....
- ٤- تتحكم .....
- ٥- التغيرات فى تركيز .....
- ٦- تتكون قيعان المحيطات من صخر .....
- ٧- حركة الألواح الصخرية تتسبب فى حدوث .....
- ٨- بسبب .....
- ٩- الأولية إستنفذت كل من .....
- ١٠- تعزى التغيرات اليومية فى الطقس إلى ما يحدث فى طبقة .....

لجنة الإمتحان والتصحيح\* :

أ.د. أمين غيث\* أ.د. محمود قورة أ.د. صلاح الببلى أ.د. صلاح عياد

2102 010001

<p>Mansura university. Faculty of sciences Zoology Department Time allow : 2 hrs Date :13/1/2015</p>		<p>Academic year 4<sup>th</sup> level Program: Environmental science Course : Animal behavior Final examination</p>
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**Answer the following questions:**

**I) Write on**

- a) The participation organs in performing a behavior action .
- b) Agonistic behavior .

**II) Discuss :**

- a) Learning based in the use of past experience results .
- b) Ingestive behavior .

**III) Explain :**

- a) Some general principles of learning .
- b) Variability and learning .

**IV) Answer :**

- a) Animals avoid being seen through colour and marking .
- b) Care-giving behavior .

**Good luck**

**Pro. Dr: Ahmed El-W.Hagrs**

Mansoura University  
Faculty of Science  
Botany Department  
El-Mansoura, Egypt



جامعة المنصورة  
كلية العلوم  
قسم النبات  
المنصورة - مصر

Final Examination in Botany  
Second Term: Jun. 2010

Educational Year: Fourth Level

Program (Branch): Environmental Science

Subject: ES 423

Course(s): Cell ultrastructure and cell  
metabolism

Time: 2 hrs

Date: 10 / 1 /2015

Full mark: 60

Question mark: 20

Answer the following questions:

I-A- Compare between each pair of the following (10 Marks):

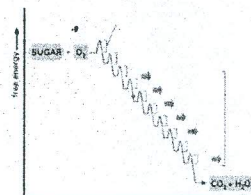
- 1- Prokaryotic cells and Eucarotic cells
- 2- The Fluid Mosaic model and Danielli-Davson model of cell membrane

B- Write on the following (10 Marks):

- 1- Protein localization in plasma membrane
- 2- Functions of Endoplasmic Reticulum

II- Fill in the space using suitable words or phrases (20 Marks):

- 1- ..... are membrane bound structures that contain hydrolytic enzymes.
- 2- Organelles responsible for bioenergetics and metabolism are ....., ....., and .....
- 3- Enzymes are unique to Endoplasmic Reticulum used as marker enzymes such as ....., ....., and .....
- 4- The inner membrane of a chloroplast is composed of flattened sacs called ..... collectively these sacs are termed .....
- 5- ..... is exit face of Golgi complex.
- 6- Enzyme substrate complex is governed usually by ..... bonds, however, adenine thymine coupling in DNA is governed by .....
- 7- The major macromolecule in the cell is .....
- 8- Holoenzyme = ..... + .....
- 9- ..... represents an example of energetically favorable reaction because .....
- 10- Activated carrier molecules are characterized by ....., ....., ..... and .....
- 11- NADH is working as ..... donor in ..... Reactions
- 12- The following figure indicates ..... at which the required activation energy is ..... and during this reaction ..... are produced.



- 13- ..... reflecting a link between ..... that generate ..... and ..... The coupling process occurs in two linked stages.

III- A-How could the cell do the followings (using figures) (12.5 Marks):

- 1- Activate lysine
- 2- Obtain NADH from glyceraldehyde-3-phosphate
- 3- Keep its permeability
- 4- Catalyze energetically unfavorable reactions
- 5- Be organized

B- Write on the following points (7.5 Marks):

- 1- The uses of both FAD and S-adenosyl methionine in the living cells
- 2- The synthesis of ATP as an example of energetically unfavorable reaction
- 3- The generation of proton gradient under anaerobic reactions

Examiners:

Prof. Magda I. Soliman  
Dr. Amr M. Mowafy