وحدة ضمان الجودة
كلية العلوم - جامعة طنطا
QUALITY ASSURANCE UNIT
FACULTY OF SCIENCE - TU

كلية العلوم
Faculty of Science

قسم النبات

بيولوجي

	Tanta UNIVERSITY, Faculty of Science, Department of Botany			
	Final Examination for (First Year) Students of Biology			
	COURSE TITLE: General Botany (2)		COURSE CODE:BO1202	
DATE: 7 JUNE, 2016	TERM: FIRST SEMESTER	TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED: 2HOURS	

I – Plant Physiology (75 marks)

A) Answer the following questions. (60 marks)

1. Explain how the thermal properties of water result from hydrogen bonding. (20 marks)
2. Illustrate how buffer solutions resist the change in pH in the enzymatic reactions. (20 marks)
3. Explain the mechanism of light reaction in photosynthesis. (20 marks)

B) Complete the following sentences. (15 marks, 1.5 each)

1. Diffusion in solutions can be effective within ..... dimensions.
2. ....., ... and osmosis are means of water translocation through the plant body.
3. Water potential can be defined as .....
4. Within limits, increasing the ..... of a system will increase the number of collisions of enzyme and substrate, leading to increasing the rate of the reaction.
5. The reduction of CO_2 to carbohydrate are coupled to the consumption of ..... and ..... produced in the light reaction.
6. The chloroplast enzyme Rubisco is very abundant, representing up to ..... of the total soluble protein of most leaves.
7. The reactions in ..... are reductive, while the reactions in respiration are .....
8. .....serves as the first step in both aerobic and anaerobic energy-harvesting reactions.
9. The ..... cycle reactions occur in the matrix of the mitochondria.
10. ..... molecules are the energy carriers used by cells to drive living processes.

II – Plant Systematic (75 Marks)

A. True or false and correct the false ones. (2 Mark each)

1. Bacterial Cysts are weak heat resistant, but exhibit higher resistance to irradiation ( )
2. All viruses are obligate parasites ( )
3. cyanobacterial akinate is one form of reproduction ( )
4. Albugo has haplobiontic life cycle ( )
5. Homothallic organisms have both male and female gametes on the same thallus ( )
6. *Peziza* is parasitic fungi ( )
7. In Bryophyta, the spore give rise to protonema, which is developed into the sporophyte ( )
8. Viruses are a cellular prokaryotic organisms ( )
9. Pinus has a well-developed vascular bundle like flowering plant ( )
10. Phycoerthrin is the main pigment of cyanobacteria that has a blue color ( )

Please, continue to the back of the paper sheet.

Examiners: *Best wishes.....*

Dr. Nasser Sewelm	**Dr. Mostafa Elshobary**

B. Complete the following: (17 Marks)

1. The partial veil of pilus of *Agaricus* called……..However, the universal veil called……..
2. The *Fucus* sex organs are grouped in the …… which are located in fertile areas called ……..
3. Most of true fungi have cell wall composed from……
4. Most of the ascomycetes reproduce asexually by formation of……
5. Yeast reproduce asexually by……,……and……..
6. Ascomycetes produce …….number of ascospores however basidiomycetes produce …..basidiospores.
7. In Funaria, …… is dominant. However, ……is dominant in Adiantum
8. Myxomycota fungi have some animal characters like ……and……..
9. Virus can be denaturated by ……and……..
10. Cyanobacterial cell wall composed of two layers 1-……2……

C. Choose the correct answer: (1 Mark each)

1. ……..is Ascomycetes fungi that didn't form ascocarp
   (a) penicillum (b) aspirgillus (c) a and b (d) yeast
2. ……is the winter infected spore of puccinia on wheat
   a) Uridiospore (b) teleiospore (c) aeciospore (d) Pycniospre
3. The non-septate basidium present in
   (a) *Peziza* (b) *Puccina* (c) *Agaricus* (d) b and c
4. The viruses parasitize on nostocacea family called ……viruses
   (a) Wide host range (b) Moderate host range (c) Narrow Moderate host range (d) specific host range
5. Choose the coenocytic fungi from the following
   (a) *Albugo* (b) *Rhizopus* (c) *Agaricus* (d) a and b
6. Pretonima stage of Funaria has ……chromosomal number
   (a) Haploid (b) diploid (c) triploid (d) not specific
7. ……are the gametes that have globoid ovum and motile zoospre
   (a) Isogametes (b) Anisogametes (c) Oogametes (d) Oogamy
8. Which of the following techniques used for commercial vaccine production?
   (a) Animal Inoculation (b) Chick-Embryo Cultures (c) Tissue Culture (d) Bacterial Cultures

D. Write in brief with drawings if possible: (5 Marks each)

1. Virus and virion.
2. Isidia and soridia in lichen
3. Conjugation in *Spirogyra.*
4. *Puccinia* life cycle on wheat only.
5. Different branches and leaves of *Pinus.*
6. *Riccia* life cycle

Examiners: ***Best wishes……***

Dr. Nasser Sewelm	Dr. Mostafa Elshobary