
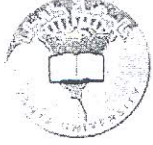




# المستوى الثالث


## نبات

د. أنور س. م. عبد الباقى

	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 ( <u>ThirdYear</u> ) students of <u>Special Botany</u>		
COURSE TITLE:	Stress Physiology		COURSE CODE: <b>BO3210</b>
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
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applied microbiology

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

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 hyperparasitism namely ----  
-----,-----,-----and-----.
- 2- Toxin produce by *Gliocladium virens* called -----.
- 3- *Metarhizium 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*

