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				<b>TANTA UNIVERSITY, FACULTY OF SCIENCE, BOTANY DEPARTMENT</b>			
<b>Final Examination for level 4 Students (Chem/ Botany)</b>							
<b>Course title:</b>		<b>MYCOLOGY AND PLANTPATHOLOGY</b>				<b>Course Code: MB4232</b>	
<b>DATE:06,JUNE, 2015</b>		<b>TERM: SECONDS</b>		<b>TOTAL ASSESSMENT MARKS: 150</b>		<b>Time Allowed: 2 hours</b>	

**Answer the following questions:L-**

**Section [1]: Mycology**

**QI-Write on 2 of the following : (37.5mark)**

- A- Key to classes of Myxomycota and Mastigomycotina.
- B-Classification of *Allomyces* sp. and describe the life cycle.
- C-Formation of Ascocarps in Ascomycotina.

**QII-A-Compare between each of the following: (37.5mark)**

- 1-Different genera of Peronosporaceae.
- 2-Homothallic and heterothallic spp. of *Rhizopus*.

B- Key to subclasses of Myxomycetes and describe the life cycle of *Physarum* sp.

**Section2: Plant pathology.**

**QIII- A-Identify the following: (17.5mark)**

- 1-Inoculation – Penetration – Invasion.
- 2-Monoecious and Heteroecious pathogens in rust diseases.
- B- Describe stages of the disease cycle of Ergot. (20mark)

**QIV-A - Write on the pathogens, symptoms and mechanisms of infection in the following diseases.(20mark)**

- 1- Bacterial soft rot of vegetables.
- 2-Clubroot of cabbage.

**B- Complete the following: (17.5mark)**

- 1-Types of infection in damping off disease .....,.....
- 2-*Plasmodiophora* present in the soil as.....,and inside the host cell as.....
- 3-Stages of the formation of infection theared.....

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4-Types of spores in Smut disease .....,.....

5-The occurrence of plant disease depend on.....,.....,.....

6-Types of infection in Smut diseases.....,.....

7-Classes of Basidiomycotina.....,.....,....andclasse....causes rust disease to wheat plant

**Best wishes**

**.Prof.DR. OMYMA AHMED**

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TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF CHEMISTRY				
FINAL EXAM FOR FORTH STUDENTS (CHEM/ BIO, ZOL, INS, GEO, MICR, BOT)				
COURSE TITLE:		SELECTED APPLICATION OF POLYMER		COURSE CODE: CH4246
DATE:	JUNE 1, 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2 HOURS

1) **LDPE and HDPE, both are polymers of ethene but there is marked difference in their manufacturing and properties, Explain? (4 marks)**

2) **Choose the correct answers: (18 marks)**

- i) **Natural rubber is:**  
 (a) Trans-polyisoprene; (b) Chloroprene;  
 (c) Buna-S; (d) Cis-polyisoprene
- ii) **Filler added to polymer to.....**  
 (a) decrease working time; (b) Decrease the modulus  
 (c) decrease the cost (d) Decrease thermal properties
- iii) **Polymer used in sunglass frame is**  
 (a) Poly(ethylene); (b) Poly(butadiene);  
 (c) Poly(cellulose acetate); (d) Poly(ethylene terephthalate)
- iv) **Soft drinks and baby feeding bottles are generally made up of:**  
 (a) polystyrene; (b) polyester, (c) polyurethane (d) polyamide
- v) **The miscible polymer blend has only..... phase**  
 (a) One; (b) two; (c) three; (d) multiple
- vi) **Which of the following polymers is opaque, low-density, tough, rigid, non-toxic, and the recycling mark is number 7.**  
 (a) Polyethylene; (b) Acrylonitrile-butadiene-styrene  
 (c) Polyethyleneterephthalate; (d) Polytetrafluoroethylene
- vii) **Presence of more hydrophilic groups in the backbone of polymers will**  
 (a) decrease the degradation of polymer

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- (b) Increase the degradation of polymer
  - (c) Stabilize the polymer
  - (d) No effect on the polymer

viii) **The purpose of lubrication is**

- (a) To reduce friction,
- (b) To reduce wear,
- (c) Transfer heat produced,
- (d) All of above.

ix) **Dental composites involve the use of .....polymer with inert fillers**

- (a) Teflon;
- (b) acrylic;
- (c) polyethylene;
- (d) urea-formaldehyde

3) **How can we enhance the compatibility between the hydrophobic polymer and natural fibers? Explain your answers by examples. (4 marks)**

4) **Write the mechanism of PLA and PHB production (4 marks)**

5) **Write briefly on five of the following (20 marks)**

- (a) Plasticizers
- (b) UV-stabilizers
- (c) Classification of composites
- (d) Flame retardant
- (e) Manufacturing of crosslinked silicones
- (f) Colorants additives
- (f) Classification of biodegradable polymers

**With best regards,**

EXAMINERS      PROF. EL-REFAIE S. KENAWY

DR. MOHAMED A. ABDELWAHAB

