

Faculty of Science Botany and Microbiology Dept. Biotechnical Analysis (B453)Course: Time: 2 hours Marks:50 marks		كليه العلوم قسم النبات والميكروبيولوجى Summer Semester 2017/2018 Level: Fourth

Answer the following questions

First Question: Compare in table between only five of the following:- 4 marks for each)

1. HPLC and GC.
2. Vertical and swinging-bucket rotors.
3. Spectrophotometers and colorimeters.
4. Single and double beam spectrophotometers.
5. Immunonephelometry and immunoprecipitation.
6. Ion exchange Chromatography and Molecular Exclusion Chromatography.

Second Question: Write in details about only five of the following:-

(4 marks for each)

a) Elution techniques.
b) UV Spectrometers.
c) Factors affecting column efficiency.
d) Components of Immunoassay kit.
e) Selection of centrifuge tubes and centrifuge cations.
f) Classification of chromatography according to the packing of the stationary phase and mobile phase.

Third Question: Complete the following sentences:- (10 marks)

a. The eluate is.....

b. ..... is type of cell lysis by chopping action.

c. A chromatogram is.....

Please Turn Over

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d. HPLC, a ..... provides the higher pressure required to move the mobile phase and sample.

e. There are two basic types of atomic spectrometers.....and.....

f. Buffer capacity is .....

g. The .....chromatography used when different substances have very similar R_f values.

h. Retention time is .....

i. Chromatography is physical method of separation of component between two phases .....and.....

j. R_F=.....

Good luck

Dr/ Eman Aldaby

Assiut University
Faculty of Science
Botany&Microbiology Department

Date: August , 2017
The time allowed: 2 hours
Total marks: 50

Second Semester-Final Examination Subject: Symbiosis Microbiology (B496)

Students: (Microbiology; Chemistry and Microbiology Sections)

First Part

General Instructions:-Attempt any **2 QUESTIONS**. Write the answer in the University Examination Answer Book provided. **Use well labeled diagrams where appropriate.**

I. Write an account on the symbiosis and their importance for five only of each of the following: **(12.5 marks)**

a. Bioluminescent bacteria-deep sea fish.
b. Bacteria- aphid and leaf hopper.
c. Bacteria-termites.
d. Cyanobacteria -Bryophyte
e. *Nostoc- Azolla*
f. Cyanobacteria-Zema

2. Describe the different types of infection process and nodule development of *Frankia*-plant mutualism. **(12.5 marks)**

3. Describe the process of nodulation and nitrogen fixation in Rhizobium-legume symbiosis. **(12. 5 marks)**

With My Best Wishes
Prof. Dr. Mohamed Hemida Abd-Alla

Second Part

1. Write short notes on: (Answer 3 only) (9 marks)

   A. Development of intraradical hyphae of AM fungi.
   B. Lichen thallus.
   C. Life cycle of AM fungi.
   D. Grouped of mycorrhizal plants.
   E. Sources of mycorrhizal hyphae that penetrate the epidermal root cells.

2. Discuss the function of the following: (Answer 3 only) (6 marks)

   A. Mantle.
   B. Ericoid mycorrhizas.
   C. Extraradical mycelium of AM fungi.
   D. Vesicles.

3. Differentiate between: (Answer 2 only) (5 marks)

   A. Foliose and fructicose.
   B. Arbutoid and monotropoid mycorrhizas.
   C. Sexual and vegetative reproduction of lichen.

4. Put (√) or (x) and correct the false sentences: (5 marks)

   A. Root colonization brings the symbiotic interaction and dependent on fungal propagule.
   B. Ericoid mycorrhizal plants involve the colonization of epidermal cells followed by the formation of hyphal complex in each colonized cell.
   C. All fungal species involved in the ectomycorrhiza symbiosis belong to families in the Basidiomycotina.
   D. Intracellular hyphae develop a hyphal complex within epidemial and cortical cells in ectendomycorrhizal plants.
   E. Isidium is a small outgrowth of lichen thallus and mean of asexual reproduction.

With My Best Wishes
Dr. Nivien Allam

Assiut University
Faculty of Science
Botany&Microbiology Dept.
Course code: (498 N)

Final exam of: food microbiology
Year: 2016/2017
Time: 2 hour
Total marks: 50 marks

Part (1)

A. Write on only four of the following questions. **(14 Marks)**

1- The effect of water activity on microbial growth in food

2- Predominant microorganisms in water

3- The important role of yeast in food

4- Benefit uses of filamentous fungi in food industry

5- Normal Microbiological quality of cereal, starches and gums

(B) Complete the following: **(11 marks)**

1- Viruses important in food because..... and .....

2- Coliforms bacteria include .....,.....,.....,.....which used as an index of sanitation.

3- The disadvantages of microbial proteins is .....

4- Dextran is exopolysaccharides (EPS) produced by ..... while growing in medium contain ....., which used as .....

6-.....is filamentous fungi induces rotting of fruits, rancid flavor in dairy products and considered as mycotoxins producer.

DR/ MAYSA M. A. ALI

أنظر الى الخلف

Assiut University
Faculty of Science
Botany&Microbiology Dept.
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أنظر الى الخلف

Faculty of Science
Assiut University
Final Exam
Summer 2016/2017

Course: Compiler Theory
4th level
Time: 2 Hours
Marks: 50

- **No. of pages: 1 - No. of questions: 4** **answer all questions**

Question 1 (12 pts)

a) Briefly discuss data structure to be used for building symbol table and its effect on the basic operation of the symbol table.
b) One of the most difficult parts in compiler construction is code generation. Why?
c) Give a non-deterministic FA that accepts strings defined by the following regular expression (ab+c)|(a+bc)
d) Construct the top down parsing table for the following grammar, and say whether the grammar is LL(1). (To facilitate partial credit, you may want to show relevant FIRST and FOLLOW sets.)
S → aSA | Ab | ε
A → cA | dA | e

Question 2 (12 pts)

Here is a grammar for Pascal variables involving field selection and pointer dereferencing. The symbol id is a terminal representing a simple identifier. var' is the additional non-terminal inserted to handle the end-of-file marker $.

0. var' → var $
1. var → var ↑
2. var → var . id
3. var → id

a) Construct the LR(0) state diagram for this grammar
b) Construct the LR(0) parse table corresponding to your diagram from part (a)
c) Indicate whether this grammar is LR(0). Justify your answer.

Question 3 (12 pts)

Given the following ambiguous context free grammar
S → Ab | aaB
A → a | Aa
B → b

a) Find the string s generated by the grammar that has two derivations.
b) Show the two derivation trees for the string s.
c) Find an equivalent unambiguous context-free grammar.
d) Give the unique leftmost derivation and derivation tree for the string s generated from the unambiguous grammar above.

Question 4 (14 pts)

a) Given the following table generate intermediate code (three address code) for this expression
a := b * -c + b * -c

GRAMMAR RULES	SEMANTIC RULES
S → id := E	S.code := E.code || id.name ':=' E.name
E → E1 + E2	E.name := newtemp(); E.code := E1.code || E2.code || E.name ':=' E1.name '+' E2.name
E → E1 * E2	E.name := newtemp(); E.code := E1.code || E2.code || E.name ':=' E1.name '*' E2.name
E → - E1	E.name := newtemp(); E.code := E1.code || E.name ':=' 'uminus' E1.name
E → (E1)	E.name := E1.name E.code := E1.code
E → id	E.name := id.name E.code := ''
E → num	E.name := newtemp(); E.code := E.name ':=' num.value

|| means string concatenation with new line

With my best wishes

Dr. Mamdouh Farouk

امتحان نهاية الفصل الدراسي الصيفي :جميع المستويات المقرر: أخلاقيات المهنة والسلامة المهنية رقم المقرر ورمزه: F300	كلية العلوم	الزمن: ساعتان ٢٤ أغسطس ٢٠١٧ الاجابة في نفس الورقة

السؤال الأول: ضع علامة ✓ أو X امام العبارات التالية : **(١٠ درجات)**

١ـ مقرر أخلاقيات المهنة لا يتعلق فقط بالجوانب الفنية في عمل ما وإنما أيضاً بالأساس الأخلاقي لهذا العمـل.( )
٢ـ تدخل السلامة والصحة المهنية في كل مجالات الحياة . ( )
٣ـ وجود ميثاق أخلاقي للمهنة هام لحل اي خلافات او جدل في مجال المهنة ( )
٤ـ الأنشطة الطلابية تسهم في اكساب الطلاب عديد من الأخلاقيات . ( )
٥ـ من اهم اهداف تدريس هذا المقرر تنمية القدرة على التقييم الأخلاقي للأفعال والأقوال في إطار العمل. ( )
٦ـ أخلاقيات المهنة تعني فقط الالتزام بالقوانين الحاكمة للعمل. ( )
٧ـ الالتزام الأخلاقي يسهم في شيوع الرضا الاجتماعي. ( )
٨ـ من مبررات إفشاء الأسرار المختبرية الخاصة بالمريض حماية النفس والدفاع عن شرف مهنته . ( )
٩ـ تسهم السلامة المهنية في مواقع العمل في ابعاد المخاطر عن العاملين. ( )
١٠ـ المواليد المستنسخة تعيش عادة لفترة أطول . ( )

السؤال الثاني: اكتب باختصار خمسا من المبادئ الأساسية لأخلاقيات البحث العلمي **(٥ درجات)**

١ـ	٢ـ
٣ـ	٤ـ
٥ـ	

السؤال الثالث: أنت في جميع الأحوال قدوة للآخرين بفعلك وإن لم تقصد . علق في خمس نقاط **(٥ درجات)**

١ـ
٢ـ
٣ـ
٤ـ
٥ـ

انظر خلفه