	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF BOTANY			
	EXAMINATION FOR LEVEL 2 (MICROBIOLOGY) CREDIT HOURS			
	COURSE TITLE:	Actinomycetes		COURSE CODE: MB2107
DATE:18-1-2014	JUNE 2014	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED 2HOURS

Answer the following questions:

1-Complete the following sentences: (20 marks)

a- Actinobacteria are a group of ……with high …….in their DNA. They can be ……. or …….

b- Streptomycetes are characterised by the production of ……

c- *Corynebacterium diphtheriae* is the pathogen responsible for ……..

d- Growth of *Mycobacterium* species occurs between …… and ……

e- Three **varieties** of *C. diphtheriae* colonies could be recognized: ……,……,……

2-Detect the role of the following: (20 marks)

a- Actinomycetes in our life

b- *Streptomyces* in production of bioactive compounds.

3-Explain the importance of characteristic cell wall of *Mycobacterium* species (10 marks)

4-Discus the following sentences: **(20 marks)**

a- Pigmentation of mycobacteria

b- Biodegradation of organic pollutants by *Rhodococcus* sp.

5- **Compare between** *Corynebacteria, Mycobacteria and Nocardia* in the following (genetic markers, staining, pathogenicity) **(20 marks)**

6-Identify :cord factor, **coryneforms (10 marks)**

Best wishes

Examiner: Dr Nanis G. Allam

ميكرو خاص

	Tanta University Faculty of Science Botany Department	
Theoretical exam.	Assessment = 100 marks.	Time allowed: 2 hours.
Course Title = Instrumental Methods of Microbiology.		Course code = MB 2105.
Microbiology special program.		Academic year: 2013/2014.
Level: 2 – Semester: 1		23 June 2014.

Answer the following questions with diagrams: (10 Q. x 10 M. = 100 marks)
1- What are the main steps in the PCR reaction? And what is the benefit?
2- Mention the experimental parameters of gel filtration.
3- How can you depend on different parameters to choose a correct antimicrobial agent?
4- Give a comparison between the principles of SEM & TEM.
5- Write on types of electrophoresis.
6- Arrange the severity, and spread of pathogenic microbes within human infections.
7- Explain in brief the phases of the microbial growth curve.
8- Illustrate the principle of affinity chromatography.
9- Explain the principle of light absorption in the spectrophotometer.
10- How to control the growth and production rate in a continuous culture?

Best wishes..... Examiner:	Dr.: Anwer S.M. El-Badry.

ميكرو خاص

	Tanta University Faculty of Science Botany Department	
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Best wishes..... Examiner:	Dr.: Anwer S.M. El-Badry.

نبات ظاهر
ميكرو ظاهر

	UNIVERSITY OF TANTA, FACULTY OF SCIENCE DEPARTMENT OF BOTANY		
	FINAL EXAMINATION FOR (SOPHOMERS) Second YEAR STUDENTS BOT. & MICRO.		
	COURSE TITLE: Cell Biology		COURSE CODE: Bo 2107
DATE: 12, 1, 2014	TERM: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following questions:

Question 1:

Put (R) in front of wright sentences and (W) in front of wrong ones with correction (15 marks)

1) Integral protein is free of lipids. ( )

2) Rough ER is granular due to the presence of ribosomes. ( )

3) Chlorophyll a and b are found in the matrix of the plastids. ( )

4) Secondary phagosome contains only the enzyme. ( )

5) Chromomers are responsible for the synthesis of fats. ( )

6) Glucose is the base building unit of cell wall. ( )

7) Rheodoplast is a kind of lucoplastid. ( )

8) Replication is the production of RNA from DNA. ( )

9) Proxysomes are rich in enzymes for fatty acid metabolism. ( )

3- Centrioles are characteristic of animal cells. ( )

Question 2:

Wright shortly on the following with labeled drawings if possible (30 marks)

1) Differences between primary and secondary cell wall.
2) Heterochromatin.
3) Telomers.
4) Solenoids.
5) Functions of Lysosomes.
6) Chromosome banding

Question 3 :

Describe with labeled drawing only (20 marks)

- Plasma membrane
- Plasmodesmata
- Chloroplast
- Endoplasmic reticulum.

Question 4:

Comlete the following sentences: (15 marks)

1) Cell cycle is divided into four stages....., ..., ..., ...

2) Crossing over is .....

3) Chromomeres are .....

4) Transcription is ....., however, replication is .....

5) Facilitated diffusing is the transport of molecules .....utilizing energy.

6) The function of scaffold protein is .....

7) There are two types of endoplasmic reticulum ....., ...

8) Thylakoids are closely packed at certain arms to form .....

9) Cristae are infoldings in .....membrane.

Question5:

Discuss each of the following: (20 marks)

- The origin of Golgi apparatus.
- Lipid fraction of plasma membrane.
- Differences between prokaryotic and eukaryotic cell.
- Prokaryotic origin of mitochondria.
- Chemical structure of DNA.

Best wishes

Examiner	Dr. : Hanan Ibrahim Sayed Ahmed

Tanta University
Faculty of Science
Department of Chemistry

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Principles of Analytical Chemistry (CH2105)
(First Semester Test - Level two)

كيمياء/ كيمياء حيوي- كيمياء/ نبات – كيمياء/ ميكروبيولوجي – نبات – ميكروبيولوجي

(First Semester Test - Level three)
كيمياء/ جيولوجيا

December 31, 2013 Total Assessment Marks: 100 Time Allowed: 2 h

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(I)- Write (√) for the true and (×) for false statements, (Give the reasons):

(65 Marks)

1) Acid media must be avoided in determination of Cl^- by titration with $AgNO_3$ ( )
2) ph.ph is dibasic acid while M.O is Monoacidic base ( )
3) For determination of CNS^- by titration with Hg^{+2} ions white precipitate of mercury nitroprosside is formed at the end point. ( )
4) Weak acid of $pK_a \leq 10^{-7}$ give sharp end point. ( )
5) For saturated solution of AgCl ($K_{sp}(AgCl) = 1.2x10^{-10}$), white precipitate can be observed. ( )
6) The useful pH range of ph.ph is 8-10. ( )
7) For titration with EDTA, metal-EDTA complex must be less stable than metal-indicator complex. ( )
8) Detection of end point in "Mohr method" is the formation of a soluble color compound. ( )
9) 2.5 gm of Na_2CO_3 dissolved in 500 ml of water. Normality of this solution is 0.05 gm.eq/L (Atomic weight : Na = 23, C = 12, and O = 16 gm/mol). ( )
10) Upon addition of S^{-2} as precipitant agent to mixture of (Ag^+ and Hg^{+2}), Ag_2S is precipitated first then HgS ($K_{sp}(Ag_2S) = 2x10^{-29}$ & $K_{sp}(HgS) = 4x10^{-53}$) ( )
11) Cu metals can not dissolve in HCl but it can dissolve in HNO_3 ($E^o_{Cu/Cu2+} = +0.34$ V & $E^o_{NO3^-/NO} = +0.96$ V vs. NHE and $E^o_{H2/H+} = 0.0$) ( )
12) H_3PO_4 can not be titrated stepwise with NaOH ($K_{a1} = 7.5x10^{-3}$, $K_{a2} = 6.2x10^{-8}$ and $K_{a3} = 1x10^{-12}$) ( )
13) Cu^{+2} can almost completely complexed with EDTA at pH 3.5 ( )

باقي الأسئلة في الصفحة الخلفية