College of Science كليه العلوم

Department of Botany & Microbiology قسم النبات والاحياء الدقيقه

First Midterm Exam
Academic Year 1447 Hijri- First Semester

Exam Information معلومات الامتحان			
Course Name	**Antibiotics**	مضادات حيوية	اسم المقرر
Course Code	**463 MBIO**	463 حدق	رمز المقرر
Exam Date	**2025-10-08**	1447-04-16	تاريخ الامتحان
Exam Time	**01 00 PM**		وقت الامتحان
Exam Duration	**2 hours**	ساعتان	مدة الامتحان
Classroom No.	**1 B11 B. 5**	١ب ١١ م ٥	رقم قاعة الاختبار
Instructor Name	**Dr. Naiyf S Alharbi**	د. نايف بن سلطان الحربي	اسم أستاذ المقرر

Student Information معلومات الطالب		
Student's Name		اسم الطالب
ID number		الرقم الجامعي
Section No.	**4569**	رقم الشعبة
Serial Number		الرقم التسلسلي

General Instructions:

- Your Exam consists of **1** PAGES (Except this page). صفحات الامتحان ١ صفحة. (باستثناء هذه الورقة).
- Keep your mobile and smart watch out of the classroom. يجب إبقاء الهواتف والساعات الذكية خارج قاعة الامتحان.

هذا الجزء خاص بأستاذ المادة

This section is ONLY for instructor

#	Course Learning Outcomes (CLOs)	Related Question (s)	Points	Points earned	Final Score
1	**CLO 1:** Initial concepts of antibiotics	**Q1** (1, 2: A, B) **Q2** (2,4) **Q3** (2)	1+0.5+0.5+0.5+0.5+0.5	____ 3.5	**10**
2	**CLO 2:** Comprehension of extracting and measuring the rate of reaction of antibiotics and antibiotic biosynthesis	**Q2** (1) **Q3** (4,5,6,7)	0.5+0.5+0.5+0.5+0.5	____ 2.5	
3	**CLO 3:** How to use antibiotic treatment and methods of use in the prevention	**Q2** (3)	0.5+0.5+0.5	____ 0.5	
4	**CLO 4:** Learn how to detect the activity of antibiotics	**Q2** (,8) **Q3** (3)	0.5+0.5+0.5	____ 1	
5	**CLO 5:** Discuss where antibiotics come from.	**Q2** (7)	0.5	____ 0.5	
6	**CLO 6:** Discuss the causes of the development of antibiotic resistance			____ 0	
7	**CLO 7:** How to use antibiotics in the treatment and side effects.	**Q2** (5,6) **Q3** (1,8)	0.5+0.5+0.5+0.5	____ 2	

EXAM COVER BAGE

Q1: Mention and discuss as required: (2 Marks)

1- Describe the role and differences between Antiseptics and Disinfectants in microbial control. **(1 Mark)**

2- Define the following terms:

A- Bacteriostatic agent: **(0.5 Mark)**

B- Antigen: **(0.5 Mark)**

Q2: Put a check (√) mark if the statement is correct and (×) mark if incorrect. (4 Marks)

1	The sedimentation coefficient of ribosomal proteins in algae and protozoa is different from that in fungi.	
2	All antimicrobials are antibiotics.	
3	Microbiological Methods these methods are used when a rapid diagnosis is required.	
4	Antibody a type of protein called an immunoglobulin that reacts with a specific antigen and acts as part of the body's vital defense mechanism.	
5	Replacement therapy means adding or injecting a harmless microbe to replace another harmful, pathogenic microbe, thus eliminating the harmful via the harmless inside the body.	
6	In vivo experiments are performed outside living organisms.	
7	The main source of natural antibiotics is marine plants.	
8	Broad-spectrum antibiotic is an antibiotic that is effective against a wide range of microbial species.	

Q3: Select the correct answer for the following Multiple-Choice Questions. (4 Marks)

1. Which of the following was used as an early example of replacement therapy?			
A. Penicillin	**B.** *Pseudomonas aeruginosa*	**C.** *Salmonella* spp	**D.** *Lactobacillus* spp
2. Which substance is used to reduce microorganisms on living tissue?			
A. Disinfectant	**B.** Sanitizer	**C.** Antiseptic	**D.** Antibiotic
3. What does MBC stand for in microbiology?			
A. Minimum Bactericidal Concentration	**B.** Minimum Bacterial Concentration	**C.** Microbial Bacterial Colony	**D.** Maximum Bacterial Count
4. What distinguishes antibiotics from other antimicrobials?			
A. Effective only against viruses	**B.** Effective only inside the body and against bacteria	**C.** Work on surfaces	**D.** Synthetic chemicals
5. What does selective toxicity refer to?			
A. The ability to kill all cells	**B.** The ability to harm microbes without harming host cells	**C.** The ability to treat viral infections	**D.** The ability to resist degradation
6. Which method uses CO_2 measurement to assess antibiotic activity?			
A. Enzyme Activity	**B.** Impedance Analysis	**C.** HS- GC	**D.** Nephelometry
7. One standard method for determining the effect of antibiotic activity is based on measuring the light extracted.			
A. Enzyme Activity	**B.** Impedance Analysis	**C.** Nephelometry	**D.** Turbidimetry
8. Breaks the cell wall/membrane by inserting chemical porous plugs, which insert into the membrane and cause the cell to leak.			
A. Bacteriostatic	**B.** Bacteriocidal	**C.** Bacteriolytic	**D.** Bacteriophage

With best wishes
Dr. Naiyf S. Alharbi