Assiut University Faculty of Science Botany&Microbiology Department



Date: Augst 25, 2025
The time allowed: 2 hours
Total mark: ____

50

Subject: Course B 271 (Bacteriology) Summer Semester- Final Examination Students: (Microbiology; Chemistry and Microbiology sections) General Instructions: -Answer the following questions in space provided. Q1. Place a tick $\sqrt{}$ in the correct answer (Ten only). 1 Which of the following is affected by Penicillin? a. Transpeptidase b. phosphonenol pyruvate C Rasmase d. Synthatase 2. Which of the following lacked in Gram-positive bacteria? a. Mucopeptide b. Plasma membrane c. Outer membrane d. Ribsomes 3 Which one of the following is used by Nitrobacter as their electron source. a. NH₄ b. NO₂ c. NO₃ d. H₂S 4 Which of the following is correct for membranous infolding in bacteria that initiate DNA replication? a. Nucleosome b. Carboxysome c. Magnetosome 5 Which of the following is causal agent of dental carries? d. Bacillus anthracis a. Streptococcus mutans b. Streptococcus C streptococcus lactis pyogenes 6 Which one of the following antibiotic inhibited p-p-bactoprenol, preventing the release of murine from its lipid carrier? a. cycloserine b. bacteriocin c. penicillin d.vancomycine 7 Which of the following is not is not a characteristic of Gram-positive bacterium? d. Plasma membrane b. Peptidoglycan c. Lipopolysaccharide 8 Which of the following is inhibited by Tetracycline? a. Protein synthesis b. Cell wall synthesis c. DNA synthesis d. Transpeptidase 9 Which phase in a growth curve that the bacteria are checking and adjusting to their environment? a. Stationary phase b. log phase c. decline phase d. lag phase 10 Which bacterial structure resembles the mitochondrion most closed in function? b. Plasmid c. Plasma membrane d. Ribosomes 11 Which one of the following is sex transmitted disease? a. Syphilis b. Tuberculosis d. dung fever c. Tetenus

(13)is not a unicellular alga		
(a) Nitzschia (b) Chlorella (c)	Cosmarium	(d) None of the above
(14) Diplontic life cycle is found in		
a) Red algae b) Charophyta	c) Green algae	d) Diatoms
(15) The number of flagella in Euglena is:		
a) One b) Two c) Four	d) Many	
(16) Which of the following algae has cup-shaped cl	nloroplast?	
(a) Chlamydomonas (b) Chlorella	(c) (a) and (b)	(d) None of the above
(17) Euglenophyta store food in the form of:		
a) Starch b) Laminarin c) Paramy	lon d) Florid	ean starch
(18) Chlorophyll b is found in		
a) Euglenophyta b) Charophyta	c) Green algae	d) All of them
(19) A monoecious alga is one in which:		
a) Male and female sex organs are on different		
b) Male and female sex organs are on the samec) Only male sex organs are present	thallus	
d) Reproduction is only asexual		
(20) Which group of algae have an inorganic cell wa	all?	munispadenevo dala W (1)
(a) Chlorophyta (b) Charophyta	(c) Bacillariophyta	(d) All of the above
(21) The life cycle of <i>Ectocarpus</i> is:		el padibace sitvocase (2).
a) Diplontic b) Haplontic c) H	aplodiplontic	d) Triphasic
) A prokaryotic alga which is rich in proteins an		
D. Reser (U-Peckish) (de mar in crischrospani) (s	ageig belefinger (4	a il dissolut (a
With all best wishes,,,,,,,,,,,,	Or. / Mohamed Goma	a

Question #3: Choose th	e correct answer for 20	ONLY of the following:-	Q3 20
(1) Cyanobacteria reprod	luce mainly by:		
a) Binary fission	b) Fragmentation	c) Both a and b d) S	Sexual reproduction
(2) Pyrenoids in green al	gae are associated with:		
a) Photosynthesis	b) Starch storage	c) Nitrogen fixation	d) Motility
(3) Desmids reproduce m	nainly by:		
a) Binary fission	b) Cell division	c) Fragmentation	d) Budding
(4) Which pigment is res	ponsible for the golden-b	prown color of diatoms?	
a) Fucoxanthin	b) Chlorophyll b	c) Phycocyanin	d) Xanthophyll
(5) Alginates are found in	n the cell wall of:		
a) Red algae	b) Brown algae	c) Green algae	d) Cyanobacteria
(6) The food reserve in re	ed algae is:		
a) Starch	b) Laminarin	c) Floridean starch	d) Glycogen
(7) Which cyanobacteriu	m is filamentous without	heterocyst?	nta Torrango Hourist 20
a) Nostoc	b) Oscillatoria c) Microcystis d)	Rivularia
8) Coenocytic condition	is found in:		
a) Chlamydomonas	b) Spirogyra	c) Vaucheria	d) Pandorina
9) Which process restore	es original size in diatom	s?	
a) Auxospore forma	tion b) Binary fission	n c) Fragmentation	d) Akinete formatio
10) Red algae lack:			
a) Chlorophyll a	b) Flagellated stages	c) Phycoerythrin	d) Cell walls
11) Nanospores is a met	hod of sexual reproduction	on in:	
(a) Cyanobacteria	(b) Red algae	(c) Brown algae (d)) None of them
12) The xanthophyta wa	lls are typically of		
(a) Cellulose Page 3 of 4	(b) Cellulose and pe	ctin (c) Silica	(d) Peptidoglyca

(e) Compound zoospore (Synzoospore)			
-			
(f) Nucule			
(g) Auxospores			
(8) Autospoies			
(h) Gonidia			
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CO Facial			
Question #2: Give the scientific term for 9 ONLY of the following:	02	W1012	
(a) Free floating 1	- Q2	9	
(a) Free-floating algae.			
(b) Multicellular algae composed of an indefinite number of cells			
(c) A prokaryotic alga which is rich in proteins and can be used as	•		
d) Reserve food metarial in a field in proteins and can be used as	s food.		
Tood material in brown algae			
e) Unicellular algae with two semi-cells.			
f) The red pigment in Cyanobacteria and red algae			
g) A green macroalga which is commonly known as sea lettuce.			
Asexual spores for <i>Chlorella</i> .			
Page 2 of 4			



Assiut University - Botany and Microbiology department

Final Exam (Summer semester 2025) for 2nd level students Phycology (273 B)

Time allowed: 2h

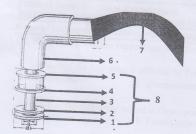
Total Marks: 50



Answer the following questions (Exam in 4 pages)

Question #1: Write on 7 only of the following (With	Drawing):	Q1	21	
(a) Palmella stage.		taation	d) Ma	
CONTROL OF THE PROPERTY OF THE				
AV Hinary fissure. D) Call division.				
A Chiampion in				
(b) Heterogyet				
(b) Heterocyst				
a) Storch 6) Lanting (6)				
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(c) Spermatium				
a) Catanyaomonas YV				
29) Silvania and manager personal area in discounty				
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CORed almedack				
an Chimophulis hi Firosilated assess				
(d) Polyhedral cells	. 200300			
(11) Manospores is a method of sexual responsement				
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Rage Loft				

Q5. Look at the diagram provided provided and answer the following: 10 Marks



1. 1. Identify each of the labeled structures from 1-8 in the dia

1 2	structures from 1-8 in the diagran	1. 4 Marks
5 6	3	4
A SHOULD UNCOUNTED TO COME	7	8

- 2. What is the name and position of the structure shown? $\frac{1}{2}$ Mark
- 3. Which type of bacteria possess it? $\frac{1}{2}$ Mark
- 4. What is the function of the provided structure? 1 Mark
- 5. What is the type of protein of the number (7)? 1 Mark
- 6. What is the function of structure number (3)? 1 Mark
- 7. What is the function of structure number (8)? 1 Mark
- 8. The energy required for the rotation of structure number 8 is generated by

1 Mark

Good Luck
Prof Dr Mohamed Hemida Abd-Alla

Q4. For each of the following, state the position, composition, and function: . (2Mark each)

Name	Position	Composition	Function
1. Fimbriae	A OUILIOII	Composition	1 unction
2. Gas vacuole			
ar ous rucusic			
		1 °0 '16 weng of ci	edaptation of thermophilic bester
3. Capsule			
5. Capsule			
		e fighte satisfiered white all	and at reasoning laborated in our pro-
			THE IS SHAPERING OFFICE AND STATES
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4. Carboxysomes			
5. Ribosome			
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Resistance o	of bacterial endo	spore to ha	rsh anvironn	annial III		
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Growth factors	r troppasa Para sagraphonos (1971) bay yang menghibi pada (1971) bang kang menghibi pada (1971) bang kang menghibi pada (
	Ob. Place a tick V is the correct answer (Tea only). 10.76m/s
	1 When of the following is affected by Penfeilha?
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eal(9 b	2. Which of the following lacked in Gram-posttive bacteries:
Obligate anaerobic	Which one of preducting a uses by application as time enabling source. It bits
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d. Mea	a Recleance ST B Carboxysome C Myunetasanta
New State	
Photoautotrophic bacteria	destracing strain
orthe the release	6 Whiteheas of the following antibiotic inhibited p-p-bytogranul, prev
sav b	nonteserine b bacteriosis o parkellin
. Traditions	
chemotaxis	de Managaria de Ma
of b	a. Protein synthesis b, Cell wall synthesis c. DNA synthesis
ating to their env	9. Writeh place in a growth curve fluid the becteria are elections and ad-
gni b	a Stationary phase b log phase c, decline phase
Magnetosome	36 Which bacterial structure resembles the milipohendrian most closed in func- tion. 5 Bit on the property of the pr
Magnetosome	Promoto entrary a museus a merita
unio de c	11. Which one of the following is say branchisted disease?
	Obligate anaerobic Photoautotrophic bacteria