



pharmaceutical microbiology

Final exam  
Time: 120 min

Student Name.....

ميكرو د. رهيفة

Part 1	
Q1	
Q2	
Q3	
Q4	
PART 2	
Q1	
Q2	
TOTAL	

MS : ROHAIFA J HADDAD

*Vibrio cholerae*

2- A 30 year old woman has non bloody diarrhea for the past 14 hours. Which one of the following organisms is least likely to cause this illness?

- a. *Streptococcus pyogenes*
- b. *Clostridium difficile*

- d. *Escherichia coli*
- c. *Shigella dysenteriae*
- d. *Salmonella enteritidis*

13- An outbreak of sepsis caused by *Staphylococcus aureus* has occurred in the newborn nursery. You are called upon to investigate. According to your knowledge of the normal flora, what is the most likely source of the organism?

- a. Nose
- b. Colon

- C) Vagina
- d) Throat

14- Cell wall protein of *Streptococcus pyogenes* cross reacts with human

- A. synovial fluid
- B. cardiac valves

- C. myocardium
- D. vascular intima

15- Streptolysin O is

- a) antigenic
- b) oxygen-labile

- c) heat-labile
- d) all of these)

16- Primary TB characterized by

- a) Necrosis of tubercle = calcification
- b) Extrapulmonary - coughing, greenish or bloody sputum

- c) tubercles expand, drain into bronchioles
- d) b+c

17- Reiter's syndrome

- a) caused by shigella desentry
- b) Caused by *Shigella flexneri*
- c) circle the true choices

- c) pains in the joints, irritation of the eyes, and painful urination
- d) can lead to chronic arthritis

18- Meningococci have three important virulence factors

- a) polysaccharide capsule, Endotoxin (LPS) (IgA) protease
- b) Pili, Endotoxin (LOS) (IgA) protease

- c) polysaccharide capsule, Endotoxin (LOS) (IgA) protease.
- d) None of the above

19- the bacteria involved in the production of dental caries is/ are:

- a) *S. agalactiae*
- b) *Streptococcus mutans*

- c) Both (a) and (b)
- d) *Streptococcus pyogene*

20- *Clostridium tetani*

- a) cause Gas gangrene
- b) cause food poisoning

- c) Produce Exotoxins - tetanospasmin
- d) pseudomembrane colitis



## Part I: microbiology

Q1: Choose the correct answer

1. Which of the following is not a gram-negative bacteria?  
A. *Clostridium perfringens* C. *Escherichia coli*  
B. *Vibrio cholerae* D. *proteus velgaries*
2. Which of the following is not true related to endotoxins?  
A. Endotoxins are secreted from cells C. Produced by gram negative microorganisms  
B. Can be linked to Meningococemia D. Can cause fever
- 3-Which of the following is not true concerning *Staphylococcus aureus*?  
A. *S. aureus* is related to inflammation C. *S. aureus* can lead to acute bacterial endocarditis  
B. *S. aureus* can cause pneumonia D. *S. aureus* does not make coagulase
- 4-Which of the following microorganisms has not been linked to UTI's?  
A. *E. coli* C. *Klebsiella*  
B. *Pseudomonas* D. *Haemophilus*
- 5- the causative agents of the following disease are initially introduced into host in the form of spores except  
a) tetanus C) scarlet fever  
b) gas gangrene d) Anthrax  
E)A+C
- 6-Many enterics possess antigens that can be used to identify groups  
A) O antigen – somatic, H antigen – flagellar, heat labile antigen K antigen – capsular, heat-labile antigen O- antigen flagellar, h antigen somatic, k antigen  
b) capsular  
c)O antigen capsular, oantigen flaellar, h antigen somatic d) All of the above
- 7- siderophores and hemolysins usually produced by:  
a)proteus c) shigella  
b) klebsella d) E.coli
- 8- shega toxin produced by  
A)shigella only c) salmonella enteric only.  
b) EIEC only d) a+b  
e) all of the above.
- 9- toxic mediated disease of *staphylococcus aureuse*  
a)Food poisoning, Toxic shock syndrome, scalded skin syndrome c) Bacteremia Pneumoniae, Osteomyeliti Endocarditis,  
b)Impetigo Folliculitis, Furuncles d) Impetig. Bacteremia Pneumoniae, Osteomyelitis
- 10- in the year 2002 some strain of *s. aureuse* appear resistant to  
a) Pencillin c) Tetracycline  
b) Vancomycin d) Methicillin
- 11- Each of the following agents is a recognized cause of diarrhea except  
a. *Clostridium perfringens* c. *Enterococcus faecalis*

Q2:

A) Complete the table

M.O	Disease	selective media
EHEC	-----	-----
-----	scarlet fever	-----
-----	Gas gangrene	-----
-----	tuberculosis	-----
-----	-----	hekton enteric agar
yersenia pestes	-----	-----
-----	-----	S.S AGAR
-----	ophthalmia neonatorum	-----

B) Differentiate with one test

M.O <sub>1</sub>	M.O <sub>2</sub>	The test
<i>E. coli spp</i>	<i>Klebsella spp</i>	
<i>Shigella</i>	<i>E. coli o157: H7</i>	
<i>Staph aureus</i>	<i>Staph epidermis</i>	
<i>Sterpcoccus pyogen</i>	<i>Streptococcus pneumonia</i>	
<i>N. gonnoreha</i>	<i>N.meningitis</i>	
<i>S Epidermis</i>	<i>s.saprophytic</i>	

Q3: EXPLAN (ANSWER 5 ONLY)

1-Advantages and disadvantages of normal flora

## 6- Treatment of clostridium difficalis

Q4 PREIFLY write about your mini research (bonus question)



## -Mechanism of action of *ETEC*

-the finding of gram-negative diplococci **within PMNs** in a urethral discharge specimen is sufficient for diagnosis *N.gonorrhoea* in men only.

-The capsule of *S. pyogenes* is non antigenic

-Protein A of *staph aureus* Disrupt phagocytosis

- The egg of *S. haematobium* can detected in urine

- *Toxoplasmosis gondii* infection causes abortion

-Hyper infection

**GOOD LUCK**

## PART II PARASITOLOGY

COMPLETE:

Host that harbors adult parasite or where sexual multiplication occurs-----

Infection acquired from animals Human beings are accidental hosts-----.

diagnostic stage of *Entamoeba histolytica* -----while----- is the infective stage.

Transmission of *Giardia lamblia* by -----,-----,-----

Trophozoites of *Toxoplasmosis gondii* has two forms ----- is motile and actively multiplying cellular stage, and -----is semidorminant, slowly dividing cellular stage

-source of infection of *toxoplasma gondii* -----,-----,-----

- Male and female reproductive organs are found in separate individuals-----

- the intermediate host of Trematodes are -----

----- occurs in the superior mesenteric veins draining the large intestine

10-----is the dwarf tapeworm.

Q2: EXPLAN:

- *Giardia lamblia* infection associated with vitamin B12 deficiency