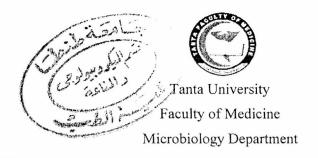
Examination for Master Degree in: Biochemistry Course title: Medical Microbiology & Immunology Date: 15 /10 / 2017 Term: October 2017 Time allowed: 3hours Total assessment marks: 100 marks



## All questions to be answered :

1-What is the mechanism of the bacterial resistance for the following drugs to affect bacteria. (10 marks)

a-Cephalosporins. (2.5 marks)

b-Aminoglycosides. (2.5 marks)

c-Tetracyclin. (2.5 marks)

d-Sulfonamindes. (2.5 marks)

#### 2-Explain the mechanisms of: (10 marks)

a- Type 3 hypersensitivity. (5 marks)

b- Graft rejection. (5 marks)

### 3- Compare between :(10 marks)

a-T-cytotoxic (Tc) and Natural killer(NK) cells

b- Class I and Class II MHC (5 marks)

### 4-Discuss the following : (10 marks)

a-Standard precautions in hospitals.(2.5 marks)

b- Virulence factors of bacteria (5 marks)

c-Bacterial toxins.( (2.5 marks)

# 5- Mention the causative agents and mode of transmission of the following diseases: (10 marks)

a- Q fever	(2.5 mark)
b- Subacute bacterial endocarditis	(2.5 mark)
c- Botulism	(2.5 mark)
d- Enteric fever	(2.5 mark)

6-Discuss the causative agent(s) mode of infection, clinical manifestations and lab. diagnosis of *Brucellosis*. (10 marks) 7- A nurse was walking out of the patient's room with a used syringe and needle in an injection tray, after having given an intramuscular injection when she bumped into another nurse in a hurry. The syringe with its needle fell from the tray on the nurse's hand and she got a prick. The nurse thinks she had 3 doses of hepatitis B vaccine in the past but has no documentation of receiving those doses. (5 marks)

- a- What are the most important blood borne pathogens that could be transmitted to such nurse. (2 marks)
- b-Discuss post exposure management needed for this nurse regarding *Hepatitis B* virus. (3 marks)

8- 25 year old woman presents for the evaluation of pelvic pain. The pain progressively worsened over the past week. She also has burning urination and vaginal discharge. She is sexually active. (5 marks)

A gram stain of cervical discharge reveals only polymorphonuclear leukocytes.

A direct DNA probe test subsequently comes back positive for *chlamydia trachomatis* 

a-Discuss the methods of lab.diagnosis of chlamydia? (4 mark)

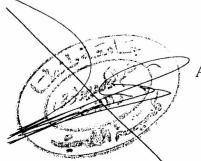
b-What is the drug of choice for proper treatment? (1 mark)

9-Describe the morphology ,culture characters and antibiotic resistant mechanisms of *Acinetobacters*? (5 marks)

10- Give account on the pathogenesis , lab. Diagnosis and treatment and prevention of cryptococus neoformans : (10 marks)

11-Discuss different theories of virus/cancer relationship. (5 marks)

12- Explain mode of infection , lab. diagnosis and prevention of yellow fever . (10 marks)



51.92

Oral exam: Monday 16/10/2017 Practical exams: Start on Monday 23/10/2017 At 8 am in Microbiology & Immunology Department **GOOD LUCK**