



Name.....

**Answer the following questions**

**Question No. 1**

**Write true or false and correct the false.**

**18 Mark**

- 1- Cartilage toxicity is the main side effect limited use of ofloxacin antibiotic in children.
- 2- The best used sulfa drug for treatment of eye infection is sulfacetamide.
- 3- Cinoxacin antibiotic is characteristic for causing pseudomembranous colitis.
- 4- Linezolid is convenient antibiotic used largely for treatment different types of infections.
- 5- Methenamine has antibacterial effect against gram positive cocci at acidic pH.
- 6- In treatment a patient suffering from infection of *Enterobius vermicularis*, one of the drug of choice is metronidazole
- 7- Telithromycin is preferred drug due its high bioavailability.
- 8- Caspofungin antifungal drug, acts by inhibiting protein synthesis.
- 9- The drug of choice for vulval itching of *trichomonas vaginalis* infection is tinidazole.
- 10- Mazzotti like reaction is a characteristic side effect of niclosamide.
- 11- Alcohol intolerance can be noted in association of administering cefopyrazone
- 12- Spectinomycin acts by inhibition of bacterial cell wall integrity.
- 13- Piperazine citrate an anthelmintic drug is effective for hook worm, acts by stimulating nicotinic receptor in neuromuscular junction.

**Question No. II (Choose the most accurate answer) 20 Mark**

1- Majed is 55-year-old male with AIDS develops systemic fungal infection, that is treated with itraconazole. What is the mechanism of action of itraconazole?

- (A) It inhibits ergosterol synthesis.
- (B) It inhibits DNA synthesis.
- (C) It inhibits Protein synthesis.
- (D) It inhibits peptidoglycan synthesis
- (E) None of the above

2- The mechanism of action of which pyrantel pamoate is effective for the treatment of hookworm disease.

- (A) Interference of cell-wall synthesis.
- (B) Interference with cell division.
- (C) Inhibition of neuromuscular transmission.
- (D) Interference with protein synthesis.
- (E) Inhibition of glucose uptake.

3- Niclosamide is anthelmintic drug used primarily to treat infections caused by

- (A) *Ascaris lumbricoides*
- (B) *Nectar americanus*
- (C) Strongyloids
- (D) *Enterobius vermicularis*
- (E) *Haemololopus nana*

4- All of the following nonprescription agents have been classified as safe and effective for acne EXCEPT

- (A) Sulfur
- (B) Salicylic acid.
- (C) Coal tar.
- (D) Azelaic acid
- (E) Retinoic acid.

5- The following statements are correct

- (A) Clindamycin activity is limited to anaerobic gram positive bacilli
- (B) Erythromycin should be avoided in patients with penicillin allergy.
- (C) Fusidic acid is mainly used for penicillinase-producing staphylococcus aureus.
- (D) A and c are true
- (E) B and c are true.

6- All of the following drugs are suitable oral therapy for a lower urinary tract infection due to *Pseudomonas aeruginosa* EXCEPT

- (A) Norfloxacin
- (B) Trimethoprim-sulfamethoxazole
- (C) Ciprofloxacin
- (D) Carbenicillin
- (E) Methenamine mandelate

7- All of the following antifungal drugs are used topically EXCEPT

- (A) Tolnaftate
- (B) Ciclopirox
- (C) Undecylenic acid
- (D) Grisofulvin
- (E) Terbinafine

All of the following  $\beta$ -lactam antibiotics have well-defined activity against gram positive bacteria except

- (A) Cefixime
- (B) Meropenem
- (C) Aztreonam
- (D) Ampicillin
- (E) Vancomycin

In the treatment of bacterial meningitis in children, the drug of choice is

- (A) Penicillin G.
- (B) Penicillin V.
- (C) Ceftriaxone
- (D) Procaine penicillin.
- (E) Erythromycin

- Sulbactam is important because

- (A) Easily penetrates gram-negative microorganism.
- (B) It is specific for gram-positive microorganism.
- (C) Is a potent inhibitor of cell-wall synthesis.
- (D) It inactivates bacterial  $\beta$ -lactamase.
- (F) It acts as an antagonist to the antibiotic.

- Khalid is 65-year old male with a pneumonia and has a sputum culture that is positive for a *Streptococcus pneumoniae* strain, which is the best choice of penicillin therapy in this patient?

- A) Ampicillin
- B) Fluxacillin.
- C) Ticarcillin.
- D) Penicillin G.
- E) Cloxacillin.

- The first step of penicillin action is

- (A) Inhibition of peptidoglycan synthesis.
- (B) Activation of murein autolysins
- (C) Binding to penicillin binding proteins.
- (D) Inhibition of bifunctional dihydrofolate reductase enzyme.
- (E) Non of the above

- The term methicillin resistance microorganism denotes those bacteria that are resistant to

- (A) Teicoplanin
- (B) Cephalosporin.
- (C) Antistaphylococcal penicillin.
- (D) b and c are true
- (E) All of the above are true.

- All of the following antibiotics act through inhibition of protein synthesis Except

- (A) Linezolid
- (B) Vancomycin
- (C) Clindamycin
- (D) Tetracycline.
- (E) Fusidic acid

15- Which of one the following antimicrobial agent is primarily administered topically.

- (A) Dicloxacillin
- (B) Penicillin G
- (C) Carbenicillin
- (D) Mupirocin
- (E) Spectinomycin

16- Grisofofulvin is a widely used antifungal agent that acts through inhibition of fungal mitosis used clinically in the management of

- (A) Systemic fungal infection.
- (B) Nail dermatophyte.
- (C) Oropharyngeal candidiasis
- (D) B and c are true
- (E) Non of the above

17- The most effective agent in the treatment of Rickettsia, Mycoplasma and Chlamydia in

- (A) Penicillin G.
- (B) Minocycline
- (C) Vancomycin.
- (D) Gentamycin
- (E) Clindamycin

18- The drug of choice for treatment of Schistosoma haematobium is

- (A) Praziquantel
- (B) Ceftriaxone
- (C) Metronidazole
- (D) Mebendazole
- (E) Diethylcarbamazibine

19- A 20-year old male has a urethral discharge. Culture of the discharge show Neisseria gonorrhoea. Which of the following agents is the best choice

- (A) Ofloxacin
- (B) Clarithromycin.
- (C) Imipenem.
- (D) Amikacin.
- (E) Sulfamethoxazole- trimethoprim.

20- Sulfonamides increase the risk of neonatal kernicterus, because they:

- (A) Diminish the production of plasma albumin.
- (B) Increase the turnover of red blood cells.
- (C) Inhibit the metabolism of bilirubin.
- (D) Compete for bilirubin-binding sites on plasma albumin.
- (E) Depress the bone marrow.

**Question No. III**

**25 Marks**

**Write the cause , ONE drug of choice of the following diseases.**

| Disease   | Cause | Drug of choice |
|---|-------|----------------|
| River blindness.  |       |                |
| Suppurative infected scabies of 10 year infant          |       |                |
| Acute sinusitis in pregnant, penicillin sensitive women |       |                |
| Elephantiasis   |       |                |
| Trichinosis   |       |                |
| Lyme disease in nursing women                           |       |                |
| Chronic cystitis of 37 year male                        |       |                |
| Yersenia induced diarrhea                               |       |                |
| Chronic bronchitis                                      |       |                |
| Histoplasma meningitis                                  |       |                |
| 7- year of male with aspirated pneumococci              |       |                |
| Aspergilliosis  |       |                |
| 18- year of female with infective endocarditis          |       |                |

**Question No.III****25 Mark**

For the following drugs, write mechanism of action, clinical uses and your comment advice about these drugs concerning contraindication, and route of administration.

**1- Metronidazole**

|                                 |  |
|---------------------------------|--|
| <i>Mechanism of action</i>      |  |
| <i>Clinical uses</i>            |  |
| <i>Contraindications</i>        |  |
| <i>Routes of administration</i> |  |

**2- Rifampicin**

|                                 |  |
|---------------------------------|--|
| <i>Mechanism of action</i>      |  |
| <i>Clinical uses</i>            |  |
| <i>Contraindications</i>        |  |
| <i>Routes of administration</i> |  |

### 3-Amphotricin B

|                                 |  |
|---------------------------------|--|
| <i>Mechanism of action</i>      |  |
| <i>Clinical uses</i>            |  |
| <i>Contraindications</i>        |  |
| <i>Routes of administration</i> |  |

### 4-Ceforuxime

|                                 |  |
|---------------------------------|--|
| <i>Mechanism of action</i>      |  |
| <i>Clinical uses</i>            |  |
| <i>Contraindications</i>        |  |
| <i>Routes of administration</i> |  |

### 5-Cycloserine

|                                 |  |
|---------------------------------|--|
| <i>Mechanism of action</i>      |  |
| <i>Clinical uses</i>            |  |
| <i>Contraindications</i>        |  |
| <i>Routes of administration</i> |  |

## Question No. V

12 Mark

### Case study 1

In treatment of Mr. Mostafa who suffers from an infection with haemophilus influenza, physician after counseling with the pharmacist, prescribed for him ampicillin 500mg q. i.d. It is clear that, treatment is ineffective, the physician prescribed chloramphenicol 500mg which was effective therapy but results in super infection as mouth candidiasis.

1-Why the first treatment was ineffective while, the second treatment was effective one.

2-What is the cause of super infection? and how would you treat this super infection?

3- Chloramphenicol is a drug give variable antimicrobial spectrum, resistance, drug interaction and side effects in different individuals and in different situations ( explain).

### Case study 2

A 38-year-old male, formerly a heroin abuser, has been on methadone maintenance for the last 13 months. Two weeks ago, he had a positive tuberculosis skin test (PPD test), and a chest radiograph showed evidence of right upper lobe infection. He was started on standard therapy. He has come to the emergency department complaining of peripheral neuritis in addition to retrobulbar neuritis impairing visual acuity and red-green color discrimination.

1- What is your diagnosis of the following case, and what is the standard therapy that started for this patient?

2- Which of the prescribed drugs are likely to have caused this patient's side effects?

**Good Luck**

Dr. Mahmoud H. Taleo