

## بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

الأسئلة الوزارية لمادة الصيدلة لسنة 2025 الدور الأول

**اضغط على اسم الجابتر للانتقال له**

**وبعد الانتقال له اضغط على اسم الجابتر كذلك للعودة للفهرس**

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**Pharmacokinetics (11 points)**

**5- What is the primary factor that affects the reabsorption from the renal tubules into the bloodstream?**

- A) Drug protein binding
- B) Drug molecular weight
- C) Drug ionization
- D) Renal blood flow
- E) Glomerular filtration rate

**10- Regarding the oral route of drug administration, all the following statements are true, except:**

- A) Oral drugs are easily self-administered
- B) Low gastric pH may inactivate some drugs
- C) Many drugs have immediate-release and extended-release preparations
- D) Oral route has the highest bioavailability
- E) Overdose of oral drugs may be overcome with antidotes

**15- All the following are true about the inhalational route of drug administration except:**

- A) Suitable for volatile agents
- B) Needs special apparatus
- C) Rapid onset of action
- D) Patients may have difficulty regulating dose
- E) Systemic absorption may occur, which is always desirable

**24- Which of the following drugs is primarily administered via the sublingual or transdermal route due to extensive first-pass metabolism?**

- A) Penicillin G
- B) Insulin
- C) Nitroglycerin
- D) Paracetamol
- E) Morphine

**25- If a drug undergoes net tubular secretion, its renal clearance will be:**

- A) More than the glomerular filtration rate
- B) Equal to the glomerular filtration rate
- C) Less than the glomerular filtration rate
- D) Equal to the rate of urine formation
- E) None of the above

**28- What is the primary mechanism by which most drugs are absorbed from the gastrointestinal tract?**

- A) Active transport
- B) Endocytosis
- C) Facilitated diffusion
- D) Inert transport
- E) Passive diffusion

**41- A route of drug administration that is characterized as the least expensive, using little equipment, and minimal training is the:**

- A) Parenteral drug route
- B) Epidural route
- C) Intrathecal route
- D) Enteral drug route
- E) Intraperitoneal route

**47- A 16-year-old male takes 800 mg of ibuprofen. What percentage of the original plasma load of ibuprofen will remain in his blood after 4 hours? (Half-life of ibuprofen is 2 hours)**

- A) 0%
- B) 12.5%
- C) 25%
- D) 75%
- E) 50%

**52- Which point is correct regarding the blood-brain barrier (BBB)?**

- A) Capillaries in brain are like that in the capillaries of kidney
- B) Endothelial cells of brain capillaries form tight junctions
- C) Brain capillary walls contain pores
- D) Capillaries in brain have slit junctions between endothelial cells
- E) It allows for hydrophilic molecules to pass easily

**53- Which one of the following is a very close route to parenteral administration?**

- A) Topical
- B) Rectal
- C) Sublingual
- D) Oral
- E) Buccal

**55- 19-years-old man weighing 70-kg and enrolled in clinical study to determine pharmacokinetic properties of drug X. If assume the drug X has low molecular weight and hydrophilic properties, the apparent volume of distribution (Vd) theoretically equal to:**

- A) 4 L
- B) 7 L
- C) 14 L
- D) 42 L
- E) 1 L

## Pharmacodynamic (7 points)

**6- If Drug A has a higher EC<sub>50</sub> and a lower E<sub>max</sub> compared to Drug B, what does this indicate about the agonist properties of Drug A?**

- A) Drug A is a full agonist and more potent than Drug B
- B) Drug A is a full agonist and less potent than Drug B
- C) Drug A is a partial agonist and less potent than Drug B
- D) Drug A is a partial agonist and more potent than Drug B
- E) Drug A is an inverse agonist and less potent than Drug B

**7- The therapeutic index of a drug is used to determine the:**

- A) Potency of drug
- B) Efficacy of drug
- C) Selectivity of drug
- D) Toxicity of drug
- E) Intrinsic activity of drug

**14- Which scenario results in postsynaptic  $\alpha$ 1-adrenergic receptor upregulation?**

- A) Chronic  $\alpha$ 1-antagonist use
- B) Daily administration of norepinephrine
- C) Long-term  $\beta$ 2-agonist therapy
- D) Increased sympathetic tone
- E) Continuous  $\alpha$ 1-agonist infusion

**16- Why is efficacy considered a more clinically useful characteristic than potency?**

- A) Efficacy determines how long a drug lasts in the body
- B) Efficacy reflects how easily the drug is metabolized
- C) Efficacy determines the drug's cost-effectiveness
- D) Efficacy is more important for ensuring a therapeutic response
- E) Efficacy ensures the drug has fewer side effects

**17- What does a quantal dose-response curve describe?**

- A) The relationship between drug dose and the proportion of a population that experiences a specific effect
- B) The maximum effect of a drug in an individual patient
- C) The relationship between drug dose and the magnitude of response in an individual
- D) The therapeutic range of a drug in a specific population
- E) The total number of receptors occupied by a drug

**29- In terms of competitive antagonism in pharmacology, which of the following statements best describes their mechanism of action?**

- A) They bind to the receptor at a different site, enhancing the effect of the agonist
- B) They bind to the same site as the agonist but do not activate the receptor, thus blocking its action
- C) They block the site of the agonist drug and activate the receptor, thus blocking its action
- D) They increase the intrinsic activity of the receptor, enhancing the agonist's effect
- E) They permanently bind to the receptor, preventing any agonist from activating it

**31- Repeated exposure of receptors to antagonists induces which of the following?**

- A) Down regulation of the receptors
- B) Tachyphylaxis
- C) Up regulation of the receptors
- D) Desensitization of the receptors
- E) None of the above

## Autonomic nervous systems (2 points)

**1- Regarding the anatomy of the ANS, which of the following neurons originate from the cranial nerve?**

- A) Postganglionic parasympathetic neurons
- B) Preganglionic parasympathetic neurons
- C) Postganglionic sympathetic neurons
- D) Preganglionic sympathetic neurons
- E) Somatic neuron

**19- Which of the following neurotransmitter receptors is an example of an ionotropic receptor?**

- A) Alpha-adrenergic receptor
- B) Dopamine receptor
- C) Beta-adrenergic receptor
- D) Nicotinic receptor
- E) Muscarinic receptor

**Cholinergic Agonists (12 points)**

**8- Which of the following anticholinesterase agents is used in the treatment of myasthenia gravis?**

- A) Physostigmine
- B) Edrophonium
- C) Neostigmine
- D) Donepezil
- E) Tacrine

**9- Which of the following is NOT used in the treatment of organophosphate poisoning?**

- A) Administration of atropine
- B) Benzodiazepines for seizure control
- C) Induction of emesis
- D) Administration of pralidoxime
- E) Supportive care including airway management

**13- Why does stimulation of the vagus nerve lead to bradycardia but not vasodilation in most systemic blood vessels?**

- A) The vagus nerve releases norepinephrine, which selectively slows the heart rate
- B) Most systemic blood vessels lack parasympathetic innervation
- C) Acetylcholine released by the vagus nerve constricts vascular smooth muscle
- D) The vagus nerve predominantly innervates the adrenal medulla, not blood vessels
- E) Parasympathetic fibers use epinephrine, which has no effect on vascular tone

**18- Pilocarpine reduces intraocular pressure in glaucoma by:**

- A) Relaxing sphincter pupillae
- B) Blocking muscarinic receptors
- C) Increasing aqueous formation
- D) Reducing aqueous formation
- E) Enhancing aqueous outflow

**20- What is the primary mechanism by which physostigmine enhances cholinergic activity?**

- A) Directly stimulating muscarinic receptors
- B) Blocking nicotinic receptors at the neuromuscular junction
- C) Preventing the release of acetylcholine from presynaptic neurons
- D) Inhibiting acetylcholinesterase, leading to increased acetylcholine levels
- E) Enhancing the reuptake of acetylcholine into presynaptic terminals

**22- What is a common effect of botulinum toxin exposure?**

- A) Increased skeletal muscle tone
- B) Skeletal muscle paralysis
- C) Enhanced release of neurotransmitter
- D) Increased acetylcholine levels
- E) Hyperactive reflexes

**26- Which of the following agents inhibits the transport of choline into the cholinergic nerve ending?**

- A) Tyramine
- B) Reserpine
- C) Botulinum toxin
- D) Hemicholinium
- E) Cocaine

**32- Choose the reversible indirect cholinergic agonist used in Alzheimer's disease, which has strong hepatotoxicity?**

- A) Donepezil
- B) Rivastigmine
- C) Galantamine
- D) Neostigmine
- E) Tacrine

**33- All these agents can activate both muscarinic and nicotinic receptors, EXCEPT:**

- A) Arecoline
- B) Carbachol
- C) Echothiophate
- D) Pilocarpine
- E) Physostigmine

**34- Regarding neostigmine, side effects of neostigmine do NOT include:**

- A) Spasm
- B) Convulsion
- C) Decreased blood pressure
- D) Abdominal pain, diarrhea
- E) Bronchospasm

**45- Regarding cholinergic receptors, nicotinic receptors are found in all the following EXCEPT:**

- A) CNS
- B) The adrenal medulla
- C) The bladder
- D) The autonomic ganglia
- E) The neuromuscular junction in skeletal muscles

**44- Regarding parasympathetic nervous system, which muscarinic receptor predominates in cardiac cells?**

- A) Muscarinic M1 receptors
- B) Muscarinic M2 receptors
- C) Muscarinic M3 receptors
- D) Muscarinic M4 receptors
- E) Muscarinic M5 receptors

## Cholinergic antagonists (7 points)

**4- Which of the following molecular actions most likely mediates the therapeutic effect of atropine?**

- A) Inhibition of ACh secretion by gastric cells
- B) Decreased cytosolic  $\text{Ca}^{2+}$  in smooth muscle cells
- C) Opening of  $\text{Na}^{+}$  channels in smooth muscle cells
- D) Increased firing discharge of the vagus nerve
- E) Activation of presynaptic cholinergic autoreceptors

**35- The action of neuromuscular blockers (NMBs) can be enhanced by all the following agents, EXCEPT:**

- A) Desflurane
- B) Gentamicin
- C) Edrophonium
- D) Ca-channels blockers
- E) Tobramycin

**36- Atropine has a systemic half-life of ..... while its duration of action in eye is about .....when used topically.**

- A) 9 hours, 8 hours
- B) 6 hours, 11 hours
- C) 10 hours, 15 hours
- D) 4 hours, 7 days
- E) 13 hours, 29 days

**42- This drug when used as NMBs produces fasciculation first, then paralysis:**

- A) Vecuronium
- B) Cisatracurium
- C) Mivacurium
- D) Succinylcholine
- E) All the above

**43- Which of the following is used in treatment of overactive bladder in patients with hepatic and dementia diseases?**

- A) Solifenacin
- B) Tolterodine
- C) Trospium
- D) Oxybutynin
- E) Atropine

**48- Postoperative muscle soreness may be a side effect of:**

- A) Succinylcholine
- B) Tubocurarine
- C) Pancuronium
- D) Atracurium
- E) Cisatracurium



**54- Which neuromuscular blocker can be eliminated by Sugammadex?**

- A) Succinylcholine
- B) Cisatracurium
- C) Rocuronium
- D) Pancuronium
- E) Mivacurium

## Adrenergic Agonists (8 points)

**11- Agonistic action on which of the following adrenergic receptors located on ciliary epithelial cells reduces aqueous secretion?**

- A) Beta-1 receptor
- B) Beta-2 receptor
- C) Beta-3 receptor
- D) Alpha-1 receptor
- E) Alpha-2 receptor

**12- In comparison between ephedrine and epinephrine, ephedrine is like epinephrine in the following feature:**

- A) Potency
- B) Penetration of the blood-brain barrier
- C) Duration of action
- D) Selectivity for adrenergic receptors
- E) None of the above

**21- Which of the following statements is FALSE regarding the actions of epinephrine?**

- A) It causes vasoconstriction in the skin and abdominal viscera via  $\alpha_1$  receptors
- B) It increases renin release by acting on  $\beta_1$  receptors in the kidney
- C) It initiates lipolysis through agonist activity on the  $\beta$  receptors of adipose tissue
- D) It is the first-line treatment for chronic asthma due to its prolonged  $\beta_2$ -mediated bronchodilation
- E) It inhibits the release of histamine from mast cells

**38- Which of the following best describes the location and function of  $\alpha_1$ -adrenergic receptors?**

- A) They are located on the presynaptic membrane and inhibit neurotransmitter release.
- B) They are present on the postsynaptic membrane and mediate smooth muscle constriction.
- C) They are found on cardiac muscle and increase heart rate and contractility.
- D) They are located on skeletal muscle and facilitate voluntary contraction.
- E) They are present in the pancreas and regulate insulin secretion.

**46- Dopamine's effects include the following, EXCEPT:**

- A) It causes vasoconstriction at higher doses due to alpha-1 activation.
- B) Peripheral mesenteric vasodilation
- C) Renal vascular bed vasodilation
- D) Interferes with norepinephrine release
- E) Interferes with insulin secretion and glucose homeostasis

**49- Which of the following agents can prevent the development of preterm labor in pregnant women?**

- A) Albuterol
- B) Isoproterenol
- C) Terbutaline
- D) Metoprolol
- E) Atenolol

**50- An asthma patient was given a nonselective  $\beta$  agonist to relieve bronchoconstriction. Which adverse effect would you expect in this patient?**

- A) Bradycardia
- B) Tachycardia
- C) Hypertension
- D) Orthostatic hypotension
- E) Headache

**51- Beta-2 stimulants frequently can cause:**

- A) Increase resistance in the periphery
- B) Increased cGMP in mast cells
- C) Skeletal muscle tremor
- D) Hypoglycemia
- E) Stimulation of renin release

## Adrenergic Antagonists (8 points)

**2- Labetalol is unique among adrenergic blockers because it:**

- A) Blocks only beta-1 receptors
- B) Blocks both alpha and beta receptors
- C) Has no intrinsic sympathomimetic activity
- D) Acts as a direct vasodilator
- E) Primarily blocks alpha-2 receptors

**3- Which of the following alpha-blockers is sometimes used off-label to facilitate stone passage in patients with ureteral calculi?**

- A) Prazosin
- B) Terazosin
- C) Doxazosin
- D) Tamsulosin
- E) Alfuzosin

**23- About a beta receptor antagonist, which has very long duration of action?**

- A) Metoprolol
- B) Propranolol
- C) Nadolol
- D) Pindolol
- E) Atenolol

**27- It is not recommended to administer MAOIs with tyramine-containing foods to avoid the following:**

- A) Reflex tachycardia
- B) Mydriasis
- C) Hypertensive crisis
- D) Constipation
- E) Urine retention

**30- In terms of the implications of  $\beta$ -blockers on glucose metabolism in diabetic patients, what should be monitored closely when these patients are treated with propranolol?**

- A) Elevated blood glucose levels post-insulin injection
- B) Enhanced physiological response to hypoglycemia
- C) Increased insulin secretion
- D) Increased glycogenolysis and glucagon secretion
- E) Pronounced hypoglycemia due to decreased glycogenolysis and glucagon secretion

**37- Which of the following agents is a non-selective  $\beta$ -blocker with antioxidant activity?**

- A) Atenolol
- B) Acebutolol
- C) Carvedilol
- D) Propranolol
- E) Timolol

**39- Which of the following statements about propranolol is false?**

- A) It prevents the expected increase in heart rate during exercise or stress.
- B) It blocks both  $\beta_1$  and  $\beta_2$  receptors with equal affinity.
- C) It is ineffective against most ventricular arrhythmias, except those induced by exercise.
- D) It increases myocardial oxygen demand, worsening angina symptoms.
- E) It causes both negative inotropic and chronotropic effects.

**40- Which of the following  $\beta$ -blockers possesses intrinsic sympathomimetic activity (ISA)?**

- A) Propranolol
- B) Nebivolol
- C) Atenolol
- D) Pindolol
- E) Esmolol

## Principles of Antimicrobial Therapy (7 points)

**67- In which of the following clinical situations is the prophylactic use of antibiotics typically recommended?**

- A) For treating established infections in the community
- B) For long-term use in patients with chronic infections
- C) As a routine measure for all hospitalized patients
- D) In patients with viral infections
- E) For preventing infections during dental procedures and surgeries

**77- Which of following antibiotic(s) is/are adequately absorbed from the gastrointestinal tract?**

- A) Vancomycin
- B) Aminoglycosides
- C) Amphotericin B
- D) Both (B) and (C)
- E) None of the above

**80- The persistent suppression of bacterial growth that may occur following limited exposure to some antimicrobial drugs is called**

- A) Time-dependent killing
- B) The post-antibiotic effect
- C) Clinical synergy
- D) Concentration-dependent killing
- E) Sequential blockade

**84- Which of the following is the most appropriate empirical treatment for suspected neonatal meningitis caused by *Streptococcus agalactiae*?**

- A) Vancomycin
- B) Ceftriaxone
- C) Penicillin G
- D) Ciprofloxacin
- E) Erythromycin

**88- All of the followings is acceptable antibiotic combinations, Except:**

- A) Piperacillin + tazobactam
- B) Sulfamethoxazole + Trimethoprim
- C) Vancomycin + Ceftriaxone
- D) Penicillin + Tetracycline
- E)  $\beta$ -lactam antibiotic + Gentamycin

**89- A neutropenic patient with a suspected bacterial infection should be treated with antimicrobial therapy:**

- A) Only after the laboratory confirms the specific pathogen
- B) Only if symptoms persist for more than 48 hours
- C) With broad-spectrum antivirals until bacterial culture results are obtained
- D) Only if fever exceeds 39°C
- E) Immediately after obtaining cultures, even before results are available

**93- Aminoglycosides are often combined with one of the following to employ a synergistic effect, particularly in the treatment of *Enterococcus faecalis* and *Enterococcus faecium* infective endocarditis.**

- A) Cephalosporin
- B) Macrolide
- C) Fluoroquinolone
- D) Carbapenem
- E) Beta lactam antibiotic

## Cell Wall Inhibitors (11 points)

**56- A 30-year-old woman on ampicillin develops severe diarrhea after 4 days of treatment. *Clostridium difficile* is identified in her stool. What is the best backup treatment for this infection?**

- A) Amoxicillin
- B) Vancomycin
- C) Ceftriaxone
- D) Aztreonam
- E) Imipenem

**57- A 36-year-old woman being treated with vancomycin for MRSA develops flushing, hypotension, and an erythematous rash over her neck and upper chest during a rapid IV infusion. Which of the following best explains the underlying mechanism of this reaction?**

- A) IgE-mediated degranulation mast cell
- B) Complement-mediated hypersensitivity
- C) Histamine release from mast cells
- D) Cytotoxic T-cell activation
- E) Daptomycin cross-reactivity

**59- Which cephalosporin is primarily eliminated via bile, making it a better option for patients with renal insufficiency?**

- A) Cefuroxime
- B) Cefepime
- C) Cefazolin
- D) Ceftriaxone
- E) Cephalexin

**60- A patient develops eosinophilia and signs of interstitial nephritis. Which drug is most likely responsible?**

- A) Amoxicillin
- B) Methicillin
- C) Nafcillin
- D) Dicloxacillin
- E) Piperacillin

**65- What is the mechanism by which gram-negative organisms reduce the penetration of  $\beta$ -lactam antibiotics?**

- A) Activation of acetyltransferases that inactivate the drug
- B) Modifications in the penicillin-binding proteins
- C) Decreased uptake or altered structure of porins in the outer membrane
- D) Increased accumulation of the drug inside the bacteria
- E) Altered expression of efflux pumps

**66- How does probenecid affect the levels of penicillins in the blood?**

- A) It decreases the absorption of penicillin
- B) It increases the renal excretion of penicillin
- C) It inhibits the secretion of penicillin, increasing their blood levels
- D) It accelerates the metabolism of penicillin
- E) It has no effect on penicillin levels

**76- Antibiotic which is effective as a single dose therapy in UTI is**

- A) Fosfomycin
- B) Gentamycin
- C) Daptomycin
- D) Ciprofloxacin
- E) Sulfamethoxazole-trimethoprim

**79- If a patient is diagnosed with gonorrhoea. Which of the following cephalosporins is the drug of choice as oral treatment in gonorrhoea?**

- A) Cefdinir
- B) Cefixime
- C) Cefotaxime
- D) Cefuroxime
- E) Cephalexin

**90- Which of the following statements is True regarding aztreonam?**

- C) Aztreonam has no cross-reactivity with penicillin.

**96- If the patient was receiving daptomycin antibiotic, which of the following laboratory values should be monitored?**

- A) Amylase
- B) Creatine phosphokinase
- C) Blood urea nitrogen
- D) Liver enzymes
- E) All of the above

**98- Which antibiotic combined with cilastatin, an inhibitor of the renal dehydropeptidase-I enzyme, increases its plasma half-life and inhibits the formation of potentially nephrotoxic metabolite?**

- A) Meropenem
- B) Doripenem
- C) Imipenem
- D) Ertapenem
- E) Chloramphenicol

**Protein Synthesis Inhibitors (9 points)**

**73- Pseudomembranous colitis is a severe inflammation of the inner lining of intestine. Which of the following drugs may cause this adverse effect?**

- A) Clindamycin
- B) Gentamicin
- C) Metronidazole
- D) Vancomycin
- E) None of the above

**81- What is the most important reason for restricted clinical use of chloramphenicol?**

- A) Its narrow spectrum of activity
- B) Emergence of chloramphenicol resistance
- C) Cause bone marrow depression
- D) It has the potential to cause superinfections
- E) Very costly

**82- Vancomycin-resistant Enterococcus faecium can be treated by**

- A) Chloramphenicol
- B) Dapsone/metronidazole
- C) Quinupristin/dalfopristin
- D) Tetracycline
- E) Tobramycin

**83- All following statements about Fidaxomicin is False Except**

- A) has wide spectrum of activity
- B) limited to gram-negative aerobes and anaerobes
- C) bacteriostatic antibiotics
- D) used primarily for treatment of Clostridium difficile infection
- E) has adequate systemic absorption

**87- All of the following statements are true about tigecycline, Except:**

- A) It is a bacteriostatic agent
- B) It reversibly binds to 30S ribosomal subunit and inhibits bacterial protein synthesis
- C) It has activity against MRSA
- D) It is a good option for patients have bloodstream infections
- E) It is administered via IV infusion and has large volume of distribution

**94- Which of the following drugs is a "ketolide" antimicrobial agent?**

- A) Telithromycin

**95- About the mechanism of action of tetracycline's, all the following are true Except:**

- C) Bind reversibly to the 50 S

**99- Long term-term use of which drug is associated with optic neuritis?**

- A) Minocycline
- B) Linezolid
- C) Quinipristine
- D) Neomycin
- E) Cefazolin

**104- Few antibiotics diffuse into prostatic fluid. Which of the following diffuses into prostatic fluid and also accumulates in macrophages?**

- A) Erythromycin
- B) Fidaxomicin
- C) Clindamycin
- D) Linezolid
- E) Amikacin

## Quinolones, Folic Acid Antagonists, & Urinary Tract Antiseptics (6 points)

**62- Trimethoprim a potent inhibitor of bacterial dihydrofolate reductase. Which is a common adverse effect of Trimethoprim?**

- A) Hyperkalemia
- B) Pulmonary fibrosis
- C) Tendon rupture
- D) Blood glucose disturbances
- E) Phototoxicity

**68- Which of the following mechanisms is NOT responsible for fluoroquinolone resistance?**

- A) Altered target binding
- B) Decreased accumulation due to efflux pumps
- C) Increased production of PABA
- D) Fluoroquinolone degradation by aminoglycoside acetyltransferase
- E) Reduced membrane permeability

**69- Which of the following is the primary reason for the synergistic effect of cotrimoxazole?**

- A) Inhibition of both DNA gyrase and topoisomerase IV
- B) Inhibition of both dihydropteroate synthetase and dihydrofolate reductase
- C) Inhibition of both PABA synthesis and folate reduction
- D) Inhibition of both RNA polymerase and DNA polymerase
- E) Inhibition of both efflux pumps and membrane permeability



**70- A neonate born at 38 weeks is diagnosed with neonatal jaundice. The mother had taken sulfamethoxazole in the last trimester for a urinary tract infection. Which of the following is the most serious potential complication in this neonate?**

- A) Kernicterus
- B) Crystalluria
- C) Stevens-Johnson syndrome
- D) Hemolytic anemia
- E) Renal failure

**91- One of the following side effects is NOT associated with Sulfonamides:**

- A) Allergic reactions
- B) Hemolytic anemia
- C) Tendinitis, tendon rupture, peripheral neuropathy, and CNS effects (hallucinations, anxiety, insomnia, confusion, and seizures)
- D) Photosensitivity
- E) Crystalluria

**97- Combination of sulfonamides with trimethoprim**

- A) Decreases the unwanted effects of sulfonamides
- B) Have bacteriostatic activity
- C) Decreases the antimicrobial activity
- D) Increases the elimination of sulfonamides
- E) Effective in treating *Pneumocystis jirovecii* pneumonia

## Antimycobacterial Drugs (4 points)

**61- Which of the following drug(s) is used for both leprosy and *Pneumocystis jirovecii* pneumonia?**

- A) Cotrimoxazole
- B) Dapson
- C) Capreomycin
- D) Clofazimine
- E) Both (B) and (D)

**86- A 35-year-old Caucasian man complained to his physician of tingling sensation in his limbs and noted that his arms sometimes felt heavy. The man, recently diagnosed with pulmonary tuberculosis, had been receiving isoniazid and rifampin for 2 months. He was diagnosed with peripheral neuropathy, a known adverse effect of isoniazid. Which of the following events most likely caused the patient's symptoms and signs?**

- A) Rifampin-induced inhibition of isoniazid metabolism
- B) Worsening of the disease, despite the therapy
- C) Allergic reaction to rifampin
- D) Inherited deficiency of N-acetyltransferase
- E) Allergic reaction to isoniazid

**92- Regarding to dapsons, the below statements are True EXCEPT:**

- A) Can cause hemolysis in G6PD deficiency
- B) May cause methemoglobinemia
- C) Used in treatment of leprosy
- D) Bacteriostatic
- E) Bactericidal

**100- A 21-year-old woman presented to the emergency department with fever, weight loss, and a productive cough. She was diagnosed with pulmonary tuberculosis and received antimycobacterial drugs. On her release from the hospital, the patient is advised not to rely solely on oral contraceptives to prevent pregnancy because they may be less effective while she is being maintained on antimycobacterial drugs. The agent most likely to interfere with the action of oral contraceptives is:**

- A) Ethambutol
- B) INH
- C) Pyrazinamide
- D) Rifampin
- E) Cycloserine

## Antifungal Drugs (3 points)

**72- Which of the following antifungal drugs is contraindicated in patients with ventricular dysfunction due to its negative inotropic effect?**

- A) Fluconazole
- B) Itraconazole
- C) Flucytosine
- D) Caspofungin
- E) Terbinafine

**74- Regarding antifungal selection, a patient with hepatic impairment should avoid**

- A) Nystatin
- B) Fluconazole
- C) Terbinafine
- D) Amphotericin B
- E) None of the above

**105- A 63-year-old diabetic patient with oral thrush. Which of the following can be prescribed and used via "swish and swallow"?**

- A) Fluconazole
- B) Terbinafine
- C) Amphotericin B
- D) Griseofulvin
- E) Nystatin

## Antiprotozoal Drugs (6 points)

**63- Regarding antimalarial drugs, Primaquine is contraindicated in patients with**

- A) Diabetes mellitus
- B) Glucose-6-phosphate dehydrogenase deficiency
- C) Hypertension
- D) Liver disease
- E) Renal Impairment

**71- What is the mechanism of action for Miltefosine in the treatment of Leishmaniasis?**

- A) Inhibits RNA synthesis
- B) Inhibits protein synthesis
- C) Blocks enzyme activity
- D) Interferes with parasitic cell membrane components and induces apoptosis
- E) Alters the parasite's DNA replication process

**78- Regarding visceral leishmaniasis, which of the following is NOT a listed treatment for visceral leishmaniasis?**

- A) Amphotericin B
- B) Sodium stibogluconate
- C) Pentamidine
- D) Paromomycin
- E) Isoniazid

**85- Which of the following drugs is effective against Entamoeba histolytica, Giardia lamblia, and Trichomonas vaginalis and may cause a disulfiram-like reaction with alcohol?**

- A) Tinidazole
- B) Metronidazole
- C) Paromomycin
- D) Iodoquinol
- E) Albendazole

**101- Giardiasis infection in pregnant patients can be treated with:**

- A) Metronidazole
- B) Nitazoxanide
- C) Albendazole
- D) Paromomycin
- E) Pentamidine

**103- A 32-years old male patient was admitted to ER due to coma from severe hypoglycemia. After several days in the hospital the patient develops a very high level of serum glucose. Although medical history of the patient showed no previous Diabetes mellitus, he was recently infected with Trypanosoma brucei gambiense and started specific related treatment. Which of the following drugs can cause these effects in the above patient?**

- A) Pentamidine
- B) Suramin
- C) Melarsoprol
- D) Eflornithine
- E) Nifurtimox

**Anthelmintic Drugs (3 points)**

**64- Regarding to the praziquantel, all of the following about praziquantel are true Except**

- A) Mechanism Involves Inducing contracture and paralysis in parasites
- B) Contraindicated in ocular cysticercosis
- C) Metabolites primarily excreted through bile
- D) Should be taken with food
- E) One of the common side effects is malaise

**75- A farmer presents with cystic hydatid disease. First-line treatment is**

- A) Praziquantel
- B) Albendazole
- C) Ivermectin
- D) Niclosamide
- E) Diethylcarbamazine

**102- Mazzotti reaction is an acute inflammatory response triggered by the death of *Onchocerca volvulus* microfilariae after treatment with specific anthelmintic drugs. Which drug can cause this reaction during treatment?**

- A) Praziquantel
- B) Moxidectin
- C) Triclabendazole
- D) Pyrantel pamoate
- E) Mebendazole

**Chapter 10,11 (1 points) (سؤال مشترك)**

**58- A 32-year-old man with atypical pneumonia is treated with an antibacterial agent. He recovers, but a follow-up ECG shows QT interval prolongation. Which of the following agents cause this adverse effect?**

- A) Ciprofloxacin
- B) Chloramphenicol
- C) Azithromycin
- D) Doxycycline
- E) Both (A) and (C)