

Aspirin reduces platelet aggregation.  
 → Low dose Aspirin inhibit COX-2 mediated TXA<sub>2</sub>  
 → thereby reducing TXA<sub>2</sub> mediated vasoconstriction and platelet aggregation and subsequent risk of cardiovascular events.

Q#7 Cimetidine, Famotidine, Nizatidine.

MoA  
 → H<sub>2</sub> receptor antagonist, act selectively on H<sub>2</sub> receptors in stomach but have no effect on H<sub>1</sub> histamine  
 → competitive antagonist and are reversible

Advs:  
 Gynecomastia, sialorrhoea, confusion, altered mentation, inhibition of P450 enzyme interfere with metabolism of prazosin, warfarin, clopidogrel, ↓ efficacy of Ketoconazole.

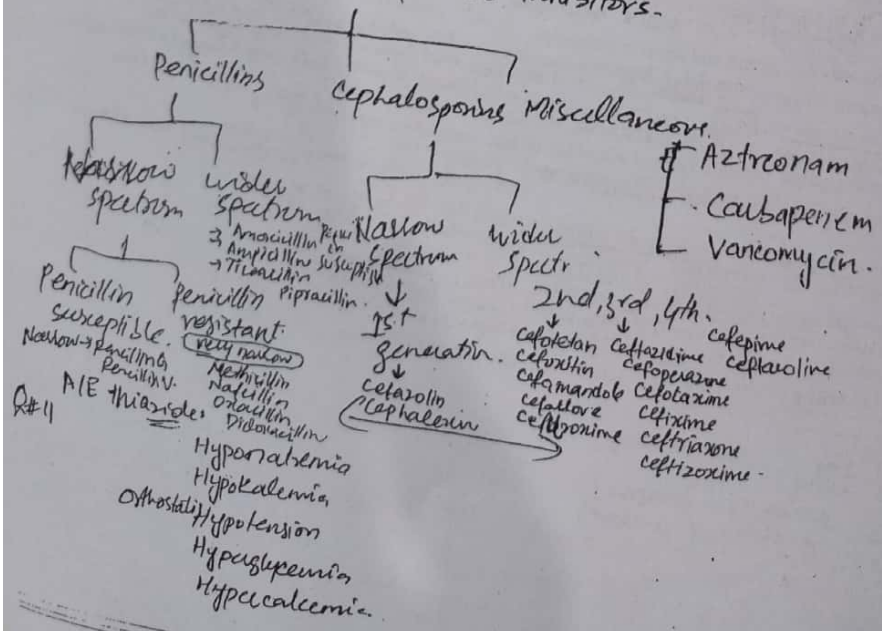
Uses:  
 Gastroesophageal reflux disease, peptic ulcer, acute stress ulcer.

Q#8a

Nitrous oxide	Halothane
i) → Gas	→ Liquid
ii) → potent analgesic	→ less potent
iii) → less solubility	→ more solubility
iv) → no metabolism	→ Hepatic metabolism
v) → MAC > 100	→ MAC 0.75
vi) → Gas partition coefficient 0.47	→ 2.30
vii) → safe in pregnancy	→ Not safe.
viii) → No Hypotension, arrhythmias, respiratory effect	→ induce all three effect
ix) → No muscle relax	→ muscle relax
x) → A/E Megaloblastic anemia	→ malignant hyperthermia.

Q#10

cell wall synthesis inhibitors.



Q1 (b) On graded dose response curve, the conc. or dose that causes 50% of maximal effect or toxicity  
 On quantal dose response curve, the conc. or dose that cause specified response in 50% of population!



THE SUPERIOR COLLEGE, LAHORE  
 2ND PROFESSIONAL MBBS ANNUAL EXAMINATION 2015

**PHARMACOLOGY**  
**SEQ'S**

Roll No. 13149

Total Marks: 75

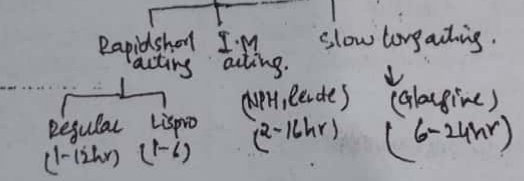
Q2 a) Chemically antagonist of organophosphate  
 Time Allowed: 2 hours

→ Pralidoxime given 1gm in 100ml of Normal saline (inhibitor of choline-esterase, Amplifier of Acetylcholine release)  
 → 5% glucose I/V injection.

- The SEQ's part is to be submitted within 2 hours, Extra time will not be given.
- Neat and Writing use of margin and marker for headlines will increase the presentation of your paper.
- Do not write your name or disclose your identity in anyway.

ATTEMPT ALL QUESTIONS

1. Define BIOAVAILABILITY of a drug? Enumerate the factors which can effect it. (1+2)
2. What is LD50 and ED50? Potency and efficacy. 17K (2)
3. What are organophosphates? How do the oximes help in organophosphate poisoning. (1+2)
4. What are adverse effects of Atropine? Dry mouth, blurred vision, flushing, tachycardia, hyperthermia, urinary retention, constipation (2)
5. Classify anti-arrhythmic drugs. 12K All parasympatholytic effects, tachycardia, delirium. (3)
6. Write the adverse effects of Digoxin. Arrhythmic, nausea, vomiting, diarrhea, visual and endocrine changes. (2)
7. Give the mechanism of action and clinical uses of ASPIRIN. Acetylation of COX1, COX2 resulting in prostaglandin synthesis inhibition. (1+2) Uses: Analgesic, anti pyretic, anti-inflammatory, platelet aggregation.
8. Enumerate four disease modifying anti rheumatic drugs (DMARDs). 30KK penicillamine, etanercept, hydroxychloroquine, sulfasalazine. (2)
9. Name two cardioselective beta-blocker drugs. Acebutolol, atenolol, metoprolol. (2) PG# 20K
10. Give three most common uses of beta-blocker drugs. Angina, HT, pectoral, migraine, glaucoma, M.I. How beta-blockers lower blood pressure? Lpn 499, 498, 497, 496, 495, 494, 493, 492, 491, 490, 489, 488, 487, 486, 485, 484, 483, 482, 481, 480, 479, 478, 477, 476, 475, 474, 473, 472, 471, 470, 469, 468, 467, 466, 465, 464, 463, 462, 461, 460, 459, 458, 457, 456, 455, 454, 453, 452. (2)
11. Explain the rationale of low dose aspirin for anti platelet effect. Lpn 452. (2)
12. Enumerate four drugs used for the treatment of peptic ulcer. Write mechanism of action of Sucralfate. 485K (1.5+1.5) 483K Seroprolactin, atropine, pirenzepine.
13. Enumerate two H2-receptor blockers, their clinical uses and adverse effects. Cimetidine, Famotidine. (1+2)
14. What is MAC of an anesthetic? How does nitrous oxide differ from halothane? 210K (1+2) Notes: Basal metabolic, Dissociative, opioid, Benzodiazepines, Thiopental, tetraamines, Potassium, MBP, azobisisobutyronitrile.
15. Enumerate four intravenous general anesthetics. Thiopental, tetraamines, Potassium, MBP, azobisisobutyronitrile. (3)
16. Enumerate anti-microbial that inhibit bacterial cell wall synthesis. (3) 362K Penicillin, erythromycin.
17. Name the drug of choice used for the treatment of diphtheria and also give its adverse effects. (2) Diphtheria toxin, antitoxin, erythromycin, penicillin.
18. Enumerate two thiazide diuretics. Give their mechanism of action and adverse effects. (1+2) 40KK Hydrochlorothiazide, Chlorthalidone, Furosemide, Acetazolamide, Mannitol, Glycerol, Urea, Ethacrynic acid, Bumetanide, Torsemide, Acetazolamide, Mannitol, Glycerol, Urea, Ethacrynic acid, Bumetanide, Torsemide.
19. Enumerate clinical uses and adverse effects of metronidazole. 40KK dark color urine, GI irritation, parosmia, headache, disulfiram reaction. (3)
20. What is the rationale behind the use of multi drug therapy in tuberculosis? (2) For safety profile, less NE, to avoid resistance.
21. Write briefly the mechanism of action and adverse effects of: (5)
22. Amphotericin B as anti fungal → Fungicidal, polyenes are molecules with both hydrophilic and lipophilic characters bind to ergosterol synthesis and formation of artificial pores. (1)
23. Methotrexate as anti cancer → Inhibit DHFR, results in inhibition of thymidylate, purine, nucleotide synthesis and methionine synthesis. resp. dep. Mitosis, constipation. (1)
24. What are Actions of Morphine. Which actions of morphine do not show tolerance? (3) Analgesia, Euphoria, Emesis, Antitussive.
25. What is Antidote for morphine poisoning? Naloxone 0.4-0.8mg I/V and repeat after every 10-15 min if no response. (3+1.5+0.5)
26. Enumerate anti-cancer drugs that act as spindle poisons. What is their mechanism of action? 4150 Vinorelbine, Vincristine, Vinorelbine, Vindesine, Vinorelbine, Vindesine, Vinorelbine, Vindesine, Vinorelbine, Vindesine, Vinorelbine, Vindesine. (1+1)
27. What are the general adverse effects of anti cancer drugs? Alopecia, myelosuppression, Bone marrow suppression, Anemia, Nausea, vomiting, Male, female sterility. (3)
28. What is the mechanism of action of biguanides? ↓ endogenous glucose production (2)
29. Classify insulin according to their duration of action. Give example for each group. (3)





Pro-drug → Becoming Pro-drug

hypotension, hypotension, reduce initial left hand prevent coronary

Reflex Tachycardia  
Orthostatic hypotension

Co-codine  
Cough dextromethorphan

urgency  
in  
patient  
with  
BPH

13149

PHARMACOLOGY SEND UP

(SEQ TYPE)

2015

MARKS: 75

TIME ALLOWED: 2 HOURS

Attempt all questions. Each question carries 5 marks.

1. a. Describe the up and down regulation of drug receptors with examples. (3)

b. A patient was given 200mg dose of a drug IV and 100mg was eliminated during first 2 hours. If the drug follows first order elimination, how much will remain 6 hours after its administration. 2

2. Briefly describe the pharmacological basis for the use of following drugs:

a. Dopamine in cardiogenic shock → 12 KUM → prevent myocardial supply (1)

b. Atropine in organophosphorous poisoning → ↑ Brachykinin → ↑ Angiotensin II → dilation (1) vasoconstriction

c. ACE inhibitors in congestive cardiac failure → 305 K

d. Glucocorticoids in asthma → 305 K

e. Aspirin in myocardial infarction → inhibit platelet aggregation → ↓ secondary in continuation (1) orthostatic hypotension

uses  
acute coronary syndrome (sublingual)

Write down the uses and adverse effects of

i) Furosemide → ↑ BP, ↓ K<sup>+</sup> → mild hyperkalemia (2.5+2.5) → K<sup>+</sup> → K<sup>+</sup> → K<sup>+</sup>

ii) Spironolactone → ↑ BP, ↓ K<sup>+</sup> → mild hyperkalemia

a. Write down three uses and adverse effects of Prazosin. → uses: ↓ BP, ↓ Congestive heart failure (1)

b. What are two main uses and adverse effects of Nitroglycerine? → ↓ BP, ↓ Congestive heart failure (5)

Give a comparison between heparin and warfarin in tabulated form. 277 K

a. Write down three uses and adverse effects of Diazepam. → ↓ BP, ↓ Congestive heart failure (3)

b. Enumerate two drugs that can cause Parkinsonism. Mention two drugs used for treating drug induced Parkinsonism. → Antipsychotics, dopamine agonist → pramipexole (2)

Prophylaxis of angina (transdermal oral)

a. Write down three names and adverse effects of Tricyclic antidepressants. → K2517 (3)

b. Enumerate two uses and adverse effects of Valproic acid. → 201 K (2)

a. What do you know about preanesthetic medication? → LPN pg # 171 Antacid, antiemetic, anticholinergic, benzodiazepine (3)

b. Write three differences between Nitrous oxide and Halothane. Notes: K214 (5)

obsolete for angina (ultra short acting)

Write names of two drugs for treatment of: a. Dry cough → codeine, dextromethorphan (486 K) b. Peptic ulcer → cimetidine (483 K) c. Diarrhea → loperamide (368 K) d. Emesis → ondansetron (388 K)

Write down five uses and adverse effects of Glucocorticoids: 325 (5)

a. What are three names and uses of Third Generation Cephalosporins? → ceftriaxone, cefepime, ceftazidime (368 K) (3)

b. What are two main uses and adverse effects of Ciprofloxacin? → 388 K (3)

OFTS head ache

a. Write down a regimen for a patient with pulmonary tuberculosis. → 388 K (3)

b. Enumerate two uses and adverse effects of Insulin. → 388 K (3)

a. Write two uses and adverse effects of Chloroquine. → 426, 427 (3)

b. What are three uses and adverse effects of Metronidazole? → 428 (3)

reflex tachycardia edema (fluid retention)

a. Write down the main toxicities of following drugs and the drug options to minimize them. i) Methotrexate → ↑ liver toxicity, ↓ renal toxicity (3) ii) Doxorubicin → ↑ cardiotoxicity, ↓ bone marrow suppression (3) iii) Cyclophosphamide → ↑ bone marrow suppression, ↓ renal toxicity (3)

b. What are two uses and adverse effects of interferon-alpha? → 402 (2)

a. What is the mechanism of action and antifungal spectrum of Amphotericin B? → 401 (1+2)

b. Describe the Mechanism of action and use and Allopurinol. → 305 (2)

91K  
Q129 → 3 day regimen INH, rifampin, pyrazinamide if organisms are fully susceptible and patient is HIV negative pyrazinamide can be discontinued after 2 months and treatment continued for 4 months with 2 drug regimen.