

M.B.B.S. 2ND PROF. EXAMINATION, JANUARY- 2013
PHARMACOLOGY
PAPER FIRST

[Time allotted: Three hours]

[Max Marks: 40]

Note: Attempt all questions. Question should be answered as per the sequence given in the question paper.
 Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions – separate sheet given

(½ x 16 = 08)

Q. 2. Problem based question:

(1+2+2+2+1 = 08)

A 30 year old male was having symptoms like change in appetite and sleep pattern with suicidal ideation. He was being treated with antidepressants which led to adverse drug reactions like dryness of mouth and cardiac arrhythmias. The patient was then shifted to newer agents which block the reuptake of serotonin at neurons.

- To which class of drugs do the earlier used drug and the newer agents, used by the patient, belong to?
- Enumerate antidepressants.
- What is the mechanism of action of the two categories of drugs mentioned about? Write in brief about each of the two.
- How are serotonin reuptake inhibitors different from the drug earlier used by the patient in terms of safety and adverse drug reactions?
- What is the treatment given to a depressed patient who has occasional episodes of mania?

Q. 3. Classify beta blockers. Write in brief therapeutic uses, adverse effects & contraindications of propranolol.

(08)

Q. 4. Write short notes on:

(4 x 2 = 08)

- Zero order kinetics
- Drug Antagonism

Q. 5. Describe the rationale of use of the following drugs in given conditions

(2 x 4 = 08)

- Pre-anesthetic medication before general anaesthesia
- Allopurinol in Gout
- Steroids in Bronchial asthma
- Ranitidine in Duodenal ulcer

M.B.B.S. 2ND PROF. EXAMINATION, JANUARY- 2013

PHARMACOLOGY

PAPER FIRST- MCQ

Time allotted for MCQ – 15 minutes

SET - B

Q. 1. Multiple Choice questions (Encircle the single best response)

(½ x 16= 08)

1. Atracurium is eliminated by:
 - a. Lung esterases
 - b. Hoffman's elimination
 - c. Oxidation in liver
 - d. Tubular secretion
2. Edrophonium is preferred for diagnosis of myasthenia gravis because:
 - a. It is an anticholinergic
 - b. Has a very short T_{1/2}
 - c. Fewer adverse drug effects
 - d. Good beta blocking property
3. Skeletal muscle relaxants act on receptors:
 - a. N_m
 - b. N_n
 - c. M₁
 - d. M₃
4. Ketamine causes:
 - a. Bronchospasm
 - b. Dissociative anaesthesia
 - c. Sleep disturbances
 - d. Leg ulcers
5. True about halothane, it is:
 - a. Highly irritating and inflammable
 - b. Preferred in asthmatics
 - c. Poor anaesthetic and good analgesic
 - d. Explosive
6. The best drug for treatment of glaucoma is:
 - a. Prostaglandins
 - b. Alpha agonists
 - c. Pilocarpine
 - d. Acetazolamide
7. Which of these is a prodrug:
 - a. Levodopa
 - b. Demeclocycline
 - c. Ethambutol
 - d. Sertraline
8. NSAIDs induced peptic ulcers are best treated by:
 - a. Prostaglandin analogues
 - b. Sucralfate
 - c. Bismuth subcitrate
 - d. NaHCO₃
9. Inhalation steroids most frequently lead to this adverse effect:
 - a. Hoarseness of voice and oral thrush
 - b. Bronchospasm
 - c. Blurring of vision
 - d. Prolonged bleeding time
10. All are disease modifying drugs used in Gout EXCEPT:
 - a. Azathioprine
 - b. Sulfasalazine
 - c. Indomethacin
 - d. Chloroquine
11. Montelukast acts by:
 - a. Stabilizing mast cells
 - b. Antagonizing leukotriene receptors
 - c. Blocking M₃ receptors
 - d. Blocking H₁ receptors
12. The safest drugs in pregnancy belong to category:
 - a. A
 - b. B
 - c. C
 - d. X
13. First order kinetics is characterized by constant rate of:
 - a. Clearance(CL)
 - b. Drug elimination
 - c. Drug absorption
 - d. Drug metabolism
14. True for sublingual route of administration:
 - a. The drug bypasses the liver
 - b. Very slow drug absorption
 - c. Most common route of drug administration
 - d. Patch is applied below the tongue
15. Pre- anaesthetic medication involves the use of following drugs EXCEPT:
 - a. Antiemetics
 - b. Anti anxiety drugs
 - c. Antipsychotic drugs
 - d. Analgesics
16. Peptic ulcer due to H. Pylori can be treated by all EXCEPT:
 - a. Bismuth subcitrate
 - b. Amoxycillin
 - c. Gentamicin
 - d. Metronidazole

M.B.B.S. 2ND PROF. EXAMINATION, JANUARY-2013
PHARMACOLOGY
PAPER SECOND

[Time allotted: Three hours]**[Max Marks: 40]**

Note: Attempt all questions. Question should be answered as per the sequence given in the question paper.
Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions – separate sheet given

($\frac{1}{2} \times 16 = 8$)

Q. 2. Problem based question:

(2+1+2+1+1+1 = 8)

A 34 years old healthy lady comes to the medicine OPD with history of high grade fever, burning micturition. On examination, she was febrile with 104⁰ Fahrenheit temperature. Investigations of urine R/M showed pus cells 10-12 per HPF, RBC's 1-2 cells. Blood investigation showed TLC 14000/cc. culture reports awaited.

- a. What is the probable diagnosis and the likely causative organism responsible for the disease.
- b. Which drug would you like to prescribe to the patient.
- c. Describe the route, frequency, dose and duration of treatment.
- d. What general precautions will you advice to the patient.
- e. If it happens to a pregnant lady what changes would you like to make in the prescription and why?
- f. Mention urinary analgesics, if any.

Q. 3. Structured question:

(2+2+2+2=8)

Classify lipid lowering drugs. Write mechanism of action & adverse effects of fibric acid derivatives. Enumerate pleotropic effects of statins. What is the target goal of lipid lowering therapy in high risk patients?

Q. 4. Write short notes on:

(4 x 2 = 8)

- a. Combined oral contraceptive pills.
- b. Adverse effects of corticosteroids.

Q. 5. Write briefly about:

(2 x 4 = 8)

- a. Pyrazinamide in multidrug therapy (MDT) of Tuberculosis.
- b. Glyceryl trinitrate in acute angina.
- c. Low Molecular weight Heparins in thrombotic disorder.
- d. Ceftriaxone in bacterial meningitis.

M.B.B.S. 2ND PROF. EXAMINATION, JANUARY-2013**PHARMACOLOGY****PAPER SECOND- MCQ****Time allotted for MCQ – 15 minutes****SET - B****Q. 1. Multiple Choice questions (Encircle the single best response)****(½ x 16=08)**

1. Drug that has favorable effect on lipid profile is:
 - a. Propranolol
 - b. prazosin
 - c. Chlorthiazide
 - d. Furosemide
2. Ormifloxifene is approved for use in:
 - a. Osteoporosis
 - b. DUB
 - c. Oligozoospermia
 - d. Sterility
3. Most important complication of streptokinase therapy is:
 - a. Hypotension
 - b. Bleeding
 - c. Fever
 - d. Anaphylaxis
4. Diuretic that can cause gynaecomastia, hirsutism as a side effect on long term use is:
 - a. Amiloride
 - b. Spironolactone
 - c. Metolazone
 - d. Acetazolamide
5. Bone resorption is accelerated by:
 - a. Estrogens
 - b. Parathormone
 - c. Bisphosphonates
 - d. Calcitonin
6. Following antitubercular drug is tuberculostatic:
 - a. Isoniazid
 - b. Rifamicin
 - c. Ethambutol
 - d. Pyrazinamide
7. Following is NOT a semisynthetic penicillin:
 - a. Ampicillin
 - b. Procaine Penicillin
 - c. Cloxacillin
 - d. Carbenicillin
8. Oral contraceptives use increase the risk of occurrence of all **except**:
 - a. Hypertension
 - b. Leg vein thrombosis
 - c. Endometrial carcinoma
 - d. Gall stones
9. Antifungal drug that acts by inhibiting fungal squalene epoxidase enzyme is:
 - a. Ketoconazole
 - b. Tolnaftate
 - c. Terbinafine
 - d. Nystatin
10. Antidote of warfarin is:
 - a. Protamine
 - b. Phytonadione
 - c. Ascorbic acid
 - d. Penicillamine
11. Longest acting Nitroimidazole is:
 - a. Metronidazole
 - b. Satranidazole
 - c. Secnidazole
 - d. Tinidazole
12. ACEIs are contraindicated in:
 - a. Diabetes
 - b. PVD
 - c. Asthma
 - d. Hyperkalemia
13. Safer antimalarial drug during pregnancy is:
 - a. Quinine
 - b. Chloroquine
 - c. Pyrimethamine
 - d. Primaquine
14. Drug of choice for PSVT is:
 - a. Adenosine
 - b. Verapamil
 - c. Digoxin
 - d. Amiodarone
15. Furosemide acts by inhibiting the following in the renal tubular cell:
 - a. Na⁺ K⁺ Cl⁻ cotransporter
 - b. Na⁺ Cl⁻ Symporter
 - c. Na⁺ H⁺ Antiporter
 - d. Na⁺ K⁺ ATPase
16. Ventricular remodelling after MI involves the mediation of:
 - a. Angiotensin II
 - b. Prostaglandins
 - c. Bradykinin
 - d. TXA₂

M.B.B.S. 2ND PROF. EXAMINATION, JUNE - 2013
PHARMACOLOGY
PAPER FIRST

[Time allotted: Three hours]

[Max Marks: 40]

Note: Attempt all questions. Question should be answered as per the sequence given in the question paper.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions – separate sheet given

(½ x 16=08)

Q. 2. Problem based question:

(2+2+2+1+1 = 08)

A 40 years old agricultural laborer was brought to emergency after inhalational exposure of a pesticide spray. He complained of headache, nausea, dizziness, muscle twitching, weakness, hypersalivation, respiratory distress and impaired speech. Examination revealed pin point pupils with evidence of bladder and bowels incontinence, bradycardia and altered sensorium. Patient was provisionally diagnosed to be suffering from organophosphate poisoning.

- Explain the pharmacological bases of findings on examination in this patient.
- What drug treatment is to be initiated and why?
- Write route, dose, frequency of administration, duration of treatment and limitation of use if any, to drugs prescribed.
- What could be the delayed toxic effects of such poisoning?
- Organophosphates are rarely used for treatment of which clinical condition and why?

Q. 3. Enumerate the drugs used in treatment of idiopathic parkinsons disease. Describe in general the mechanism of action, therapeutic status and important adverse effects of levodopa and carbidopa combination.

(2+2+2+2 = 08)

Q. 4. Write short notes on:

(4 x 2 = 08)

- Drug tolerance
- Lignocaine

Q. 5. Describe the rationale of use of the following drugs in given condition

(2 x 4 =08)

- Montelukast in Bronchial asthma.
- Allopurinol in chronic gout.
- Sucralfate in peptic ulcer.
- Methadone substitution in morphine addiction.

M.B.B.S. 2ND PROF. EXAMINATION, JUNE - 2013
PHARMACOLOGY
PAPER FIRST- MCQ

Time allotted for MCQ – 15 minutes

Q. 1. Multiple Choice questions (Encircle the single best response)

(½ x 16 = 08)

1. Which drug has largest volume of distribution in the body:
 - a. Lithium carbonate
 - b. Furosemide
 - c. Mannitol
 - d. Imipramine
2. Antihistaminic drug of choice for mild nausea and vomiting due to motion sickness is:
 - a. Meclizine
 - b. Fexofenadine
 - c. Loratidine
 - d. Ceterizine
3. All of the following are used in prophylactic treatment of migraine EXCEPT:
 - a. Methysergide
 - b. Sumatriptan
 - c. Propranolol
 - d. Amitriptyline
4. The drug that interferes strongly with cytochrome P₄₅₀ metabolizing enzymes is:
 - a. Metoclopramide
 - b. Sucralfate
 - c. Cimetidine
 - d. Pantaprozole
5. Parkinson like extrapyramidal symptoms as adverse effects are most likely seen with:
 - a. Sulfasalazine
 - b. Omeprazole
 - c. Ranitidine
 - d. Metoclorpramide
6. Most serious side effect of clozapine is:
 - a. Tardive dyskinesia
 - b. Hyperproletemia
 - c. Akathesia
 - d. Agranulocytosis
7. A 40 year old man with bipolar depressive illness & has history of glomerulonephritis, the best drug to treat his maniac symptoms is:
 - a. Imipramine
 - b. Carbamazepine
 - c. Lithium carbonate
 - d. Buspirone
8. The neurotransmitter most likely to be involved in the beneficial effects of fluoxetine as antidepressant is:
 - a. Norepinephrine
 - b. Dopamine
 - c. Serotonin
 - d. GABA
9. Tolerance develops rapidly to most of the effects of Benzodiazepines EXCEPT for:
 - a. Anxiety
 - b. Muscle relaxation
 - c. Anticonvulsant activity
 - d. Sedation
10. All of the following are given orally EXCEPT:
 - a. Montelukast
 - b. Theophylline
 - c. Ketotifen
 - d. Sodium cromoglycate
11. Zero order kinetics is observed in:
 - a. Extended release preparations
 - b. Rectal suppositories
 - c. Transdermal delivery systems
 - d. Enteric coated tabs.
12. All of the following are inducers of microsomal liver enzymes EXCEPT:
 - a. Phenytoin
 - b. Gabapentin
 - c. Phenobarbitone
 - d. Rifampicin
13. All of the following are prodrugs EXCEPT:
 - a. Proguanil
 - b. Sulindac
 - c. 5- Fluorouracil
 - d. Thiopentone Na.
14. All of the following are contraindicated in pregnancy EXCEPT:
 - a. Warfarin
 - b. Doxycycline
 - c. Lithium carbonate
 - d. Amoxicillin
15. Cholestatic jaundice as ADR is seen frequently with:
 - a. Methyltestosterone
 - b. Imipramine
 - c. Propranolol
 - d. Tetracycline
16. After prolonged use, all of the following drugs are gradually withdrawn EXCEPT:
 - a. Clonidine
 - b. Corticosteroids
 - c. α- Methyl dopa
 - d. Thiazides

M.B.B.S. 2ND PROF. EXAMINATION, JUNE - 2013
PHARMACOLOGY
PAPER SECOND

[Time allotted: Three hours]

[Max Marks: 40]

Note: Attempt all questions. Question should be answered as per the sequence given in the question paper.
 Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions – separate sheet given

(½ x 16 = 8)

Q. 2. Problem based question:

(2+2+2+2 = 8)

A 35 year old male is suffering from diabetes mellitus with a blood sugar-FBS(Fasting blood sugar) of 150 mg/% and postprandial blood sugar is 200 mg%. He was on an oral hypoglycemic agent, Metformin for last one year.

- a. What is the mechanism of action of Metformin.
- b. Enumerate oral hypoglycemic agents.
- c. Differentiate between Biguanides and Sulfonylureas (write atleast 2 differences).
- d. If this patient lands up with diabetic ketoacidosis which antidiabetic agent (drug) will you shift this patient and why?

Q. 3. Structured question:

- a. Enumerate Aminoglycoside Antibiotics.
- b. Write antibacterial mechanism of action .
- c. Write important therapeutic uses of Aminoglycosides.
- d. Enumerate adverse effects & CIs of Aminoglycosides.

Q. 4. Write short notes on:

- a. Metronidazole
- b. L type Calcium Channel Blockers

(4 x 2 = 8)

Q. 5. Write briefly about:

- a. Beta blockers in Myocardial Infarction.
- b. Thiazides diuretics in Hypertension.
- c. Morphine in CHF.
- d. Clofazimine in lepra reactions.

(2 x 4 = 8)

M.B.B.S. 2ND PROF. EXAMINATION, JUNE - 2013

**PHARMACOLOGY
PAPER SECOND - MCQ**

Time allotted for MCQ – 15 minutes

Q. 1- Multiple Choice questions (Encircle the single best response)

(½ x 16=08)

1. Drug of choice in Prinzmetal angina is:
 - a. Nitrates
 - b. Hydralazine
 - c. Calcium channel blockers
 - d. Beta blockers
2. Antibiotic which inhibits cell wall synthesis is:
 - a. Cephalosporins
 - b. Tetracyclines
 - c. Aminoglycosides
 - d. Fluoroquinolones
3. Cancer chemotherapy can lead to:
 - a. Loss of hair (alopecia)
 - b. Nausea and vomiting
 - c. Severe diarrhea
 - d. All of the above
4. True about chloroquine is:
 - a. Is a tissue schizonticide
 - b. Causes no nausea and vomiting
 - c. No resistance can develop to it
 - d. Prevents conversion of heme to hemazoin
5. All are true about heparin EXCEPT:
 - a. Is an anticoagulant
 - b. Inhibitor of factor Xa
 - c. Inhibitor factor IIa
 - d. Is a fibrinolytic
6. Statins lower serum cholesterol by:
 - a. Inhibiting lipoprotein lipase
 - b. PPAR modulation
 - c. HMG-CoA inhibition
 - d. Bile acid sequestration
7. Which of these adverse drug reactions is usually NOT seen with use of angiotensin receptor blockers (ARBs):
 - a. Hypotension
 - b. Hyperkalemia
 - c. Teratogenicity
 - d. Dry cough
8. Dapsone is used for the treatment of:
 - a. Tuberculosis
 - b. Leprosy
 - c. Leishmaniasis
 - d. Gonorrhoea
9. The drug used for treatment of Acne and is highly teratogenic:
 - a. Isotretinoin
 - b. Clonidine
 - c. Ciprofloxacin
 - d. Gentamicin
10. All can be used for treatment of Amoebiasis EXCEPT:
 - a. Metronidazole
 - b. Diloxanide Furoate
 - c. Tetracycline
 - d. Diethyl carbazine (DEC)
11. Antithyroid drug which is safe in pregnancy:
 - a. Propylthiouracil
 - b. I^{131}
 - c. I^{123}
 - d. Thiocyanates
12. Progestins (Progesterone) causes all EXCEPT:
 - a. Maintenance of pregnancy
 - b. Thick, viscid cervical mucous secretion
 - c. Slight rise in body temperature
 - d. Atrophy of breast tissue
13. Diuretic causes all EXCEPT:
 - a. Hyponatremia
 - b. Hypocalcemia
 - c. Hypokalemia
 - d. Hypoglycemia
14. Hearing loss due to aminoglycosides is usually:
 - a. Cochlear
 - b. Vestibular
 - c. Permanent
 - d. All of the above
15. True about nitrates:
 - a. Are prone to develop tolerance
 - b. Inhibit Na-H-ATPase enzyme
 - c. Can be used for PSVT
 - d. Calcium channel blocking is their main action
16. Long acting insulin usually contains:
 - a. Excessive soluble iron
 - b. Zinc or Protamine
 - c. Methyl group at A16
 - d. Additional double bond at B19

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2014**PHARMACOLOGY****PAPER – FIRST****[Time allotted: Three hours]****[Max Marks: 40]****Note:** Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given

(½ x 16 = 08)

Q. 2. Give Reasons:

(1 x 4 = 04)

- Montelukast is used in bronchial asthma.
- Morphine is used as pre-anesthetic medication.
- Beta blockers are used in anxiety.
- Colchicine is used in acute gout.

Q. 3. Fill in the blanks:

(1 x 4 = 04)

- Codeine is converted to active metabolite.....in the body.
- Latanoprost is aanalogue used in Glaucoma.
- Metoprolol is a beta blocker.
- Trihexyphenidyl is used inParkinsonism.

Q. 4. Write in brief about:

(2 x 4 = 08)

- Imipramine is used in nocturnal enuresis.
- Diazepam is the preferred agent in febrile convulsions.
- Adverse effects of Halothane.
- Therapeutic uses of Succinyl choline.

Q. 5. (i) Enumerate drugs used in Grandmal epilepsy. Describe the main mechanism of action, **two** therapeutic uses and **two** long term adverse effects of phenytoin.

(04)

Q. 5. (ii) Problem based question:

(1 x 4 = 04)

A 43 year male hypertensive patient along with depression was on antihypertensive drug. He was prescribed MAO inhibitor for depression. He consumed cheese tomato during a wedding. Next day he was admitted in hospital with a BP of 190/100mm of Hg.

- Explain the possible reason(s) for his admission?
- How would you manage the patient at this stage.
- Enumerate other adverse effects of MAO inhibitors?
- What advice you will give to this patient for future.

Q. 6. Write short notes on:

(2 x 4 = 08)

- Receptor Antagonism.
- Lignocaine
- Scopolamine
- Adrenaline

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2014
PHARMACOLOGY
PAPER – FIRST (MCQ)

Time allotted for MCQ – 20 minutes**Set - B****Q. 1. Multiple Choice questions ((Darken the single best response in OMR sheet))****(0.5 x 16 = 08)**

1. All of the following are contraindications of beta blockers EXCEPT:
 - a. Asthma
 - b. Diabetes mellitus
 - c. Hyperthyroidism
 - d. Peripheral vascular disease
2. Which of the following is constant in zero order kinetics:
 - a. Plasma half life
 - b. Rate of elimination
 - c. Clearance
 - d. Plasma concentration
3. Buspirone is:
 - a. Antianxiety
 - b. Antidepressant
 - c. Antipsychotic
 - d. Antimigraine
4. Sumatriptan is:
 - a. 5 HT-1 agonist
 - b. 5 HT-2 agonist
 - c. 5 HT-3 agonist
 - d. 5 HT-4 agonist
5. Mosapride is:
 - a. Prokinetic
 - b. H₂ blocker
 - c. Ulcer healing
 - d. Prostaglandin analogue
6. All of the following are mucolytics EXCEPT:
 - a. Ambroxol
 - b. Bromhexiene
 - c. Acetyl cysteine
 - d. Noscipine
7. Drug of choice in anaphylactic shock is:
 - a. Adenosine
 - b. Adrenaline
 - c. Atropine
 - d. Acetylcholine
8. Second gas effect is seen with:
 - a. Ether
 - b. Halothane
 - c. Nitrous oxide
 - d. Sevoflurane
9. Which of the following muscle relaxant undergoes Hoffman's degradation?
 - a. Rocuronium
 - b. Pipecuronium
 - c. Mivacurium
 - d. Atracurium
10. Morphine is contraindicated in all of the following EXCEPT:
 - a. Bronchial asthma
 - b. Undiagnosed acute abdominal pain
 - c. Acute pulmonary edema
 - d. Hypothyroidism
11. Which of the following is COX II selective analgesic?
 - a. Ketorolac
 - b. Tenoxicam
 - c. Parecoxib
 - d. Diclofenac
12. Which of the following is used in treatment of drug induced Parkinsonism?
 - a. L-dopa
 - b. Lisuride
 - c. Benztropine
 - d. Atropine
13. Dantrolene sodium, a muscle relaxant is:
 - a. Acting through GABA receptors
 - b. Centrally acting
 - c. Direct acting
 - d. Na⁺ channel blocker
14. Which of the following is category A pregnancy drug?
 - a. Aspirin
 - b. Carbamazepine
 - c. Thyroxine
 - d. Lorazepam
15. Maintenance dose is calculated by the following formula:
 - a. Volume of distribution x plasma concentration
 - b. Clearance x plasma concentration
 - c. Bioavailability x plasma concentration
 - d. Plasma concentration x area under curve
16. Flumazenil is antidote for?
 - a. Benzodiazepines overdose
 - b. Methyl alcohol poisoning
 - c. Barbiturate poisoning
 - d. Salicylates overdoes

M.B.B.S. SECOND PROF. EXAMINATION, JUNE/JULY - 2014**PHARMACOLOGY****PAPER – FIRST****[Time allotted: Three hours]****Note:** Attempt all Questions.**[Max Marks: 40]**

Draw suitable diagrams wherever necessary.

- Q. 1.** Multiple choice questions- separate sheet given (½ x 16 = 08)
- Q. 2.** Give Reasons: (1 x 4 = 04)
- a. Flumazenil in BZD overdose.
 - b. Methotrexate in rheumatoid arthritis.
 - c. Trihexphenidyl in parkinsons disease.
 - d. Moclobemide in elderly depressed patients.
- Q. 3.** Fill in the blanks: (1 x 4 = 04)
- a. Lithium _____ (inhibits/augments) ADH action.
 - b. Nearly complete drug elimination occurs in _____ half lives.
 - c. Pharmacovigilance deals with _____ monitoring.
 - d. Pantoprazole is a _____ inhibitor.
- Q. 4.** Write in brief about: (2 x 4 = 08)
- a. Balanced anaesthesia.
 - b. Sodium cromoglycate in mild to moderate asthma.
 - c. Illustrate with DRC competitive antagonism and give one example.
 - d. Sumatriptan in migraine.
- Q. 5. (i)** Classify beta blockers on the basis of selectivity of action. Enumerate contraindications of beta blockers. Explain the rationale for their use in anxiety. Explain basis of use of beta blockers in glaucoma. (04)
- Q. 5. (ii)** Problem based question: (1 x 4 = 04)
- A 40 year old, diabetic female, with a past history of head trauma had two episodes of generalized tonic-clonic seizures. She was prescribed a drug and asked to come for follow up after two weeks for dose monitoring. Meanwhile she reported having raised PP glucose >140mg/dl
- a. Which antiepileptic drug was prescribed and give reason for raised PP glucose?
 - b. Explain why dose monitoring is required with this drug.
 - c. What are the other long term adverse effects of this drug
 - d. Enumerate newer antiepileptics.
- Q. 6.** Write short notes on: (2 x 4 = 08)
- a. Nuclear receptors
 - b. Aripiprazole
 - c. Diazepam
 - d. Tolerance

M.B.B.S. SECOND PROF. EXAMINATION, JUNE/JULY - 2014

PHARMACOLOGY

PAPER – FIRST (MCQ)

SET - B

Time allotted for MCQ – 20 minutes

Q. 1. Multiple Choice questions (Encircle the single best response)

(0.5 x 16 = 08)

1. Chemotherapy induced nausea and vomiting responds best to:
 - a. Domperidone
 - b. Promethazine
 - c. Ondansetron
 - d. Haloperidol
2. Clonidine acts as an adrenergic agonist on
 - a. alpha 1 receptors
 - b. alpha 2 receptors
 - c. Beta 2 receptors
 - d. Beta 3 receptors
3. Which of the following agents is used as an inhalational drug in asthma?
 - a. Hyoscine
 - b. Atropine
 - c. Ipratropium
 - d. Pilocarpine
4. Delirium, hallucinations and involuntary movements occur during recovery from:
 - a. Propofol
 - b. Ketamine
 - c. Diazepam
 - d. Thiopentone
5. One of the following is an antitussive:
 - a. Dextromethorphan
 - b. Ambroxol
 - c. Guaiphenesin
 - d. Bromhexine
6. Which of the following is a beta 1 selective agonist?
 - a. Isoproterenol
 - b. Dobutamine
 - c. Dopamine
 - d. Adrenaline
7. Bronchial smooth muscles predominantly functional receptor is :
 - a. Alpha-1 receptors
 - b. Alpha-2 receptors
 - c. Beta-1 receptors
 - d. Beta-2 receptors
8. Atypical antidepressant is :
 - a. Trazodone
 - b. Clomipramine
 - c. Sertraline
 - d. Venlafexine
9. DMARDs include all EXCEPT:
 - a. Sulfasalazine
 - b. Gold
 - c. Cyclosporine
 - d. Corticosteroids
10. Which of the following is preferred in cardiogenic shock?
 - a. Dopamine
 - b. Dobutamine
 - c. Adrenaline
 - d. Isopreneline
11. Which of the following is an irreversible alpha receptor antagonist?
 - a. Phenoxybenzamine
 - b. Prazosin
 - c. Tolazoline
 - d. Labetalol
12. Which of the following is an anorectic agent?
 - a. Fenfluramine
 - b. Isoprenaline
 - c. Ritodrine
 - d. Amphetamine
13. Buspirone is:
 - a. Antianxiety
 - b. Antidepressant
 - c. Antipsychotic
 - d. Antimigraine
14. Morphine is Contraindicated in all of the following EXCEPT:
 - a. Bronchial asthma
 - b. Undiagnosed acute abdominal pain
 - c. Acute pulmonary edema
 - d. Head injury
15. Highly selective COX II analgesic is:
 - a. Ketorolac
 - b. Tenoxicam
 - c. Parecoxib
 - d. Diclofenac
16. Acetylcholine is not used in clinical practice because :
 - a. It has low oral bioavailability
 - b. The doses required are high
 - c. It is very toxic
 - d. It is rapidly hydrolyzed

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY – 2014
PHARMACOLOGY
PAPER – SECOND

[Time allotted: Three hours]

[Max Marks: 40]

Note: Attempt all Questions.

Draw suitable diagrams wherever necessary.

- Q. 1.** Multiple choice questions- separate sheet given (½ x 16 = 08)
- Q. 2.** Give Reasons: (1 x 4 = 04)
- Low dose thiazides are used in treatment of Hypertension
 - Beta blockers are preferred antihypertensives in younger hypertensive patients with CAD
 - Isosorbide mononitrate is not used in acute angina
 - Sotalol can cause Torsade Depointes arrhythmias in patients as an adverse effect.
- Q. 3.** Fill in the blanks: (1 x 4 = 04)
- I^{131} is used preferably in hyperthyroid patients ofage.
 - Name one selective estrogen receptor modulator
 - The glucocorticoid drug prescribed for alternate day therapy is
 - The insulin preparation preferred in diabetic ketoacidosis is
- Q. 4.** Write in brief about: (2 x 4 = 08)
- HMG Co A reductase inhibitors.
 - Fibrinolytic agents.
 - Drug therapy of enteric (typhoid) fever.
 - Cell cycle specific anticancer drugs
- Q. 5. (i)** Structured question: (4)
- Classify drugs used in heart failure. Describe mechanism of action of vasodilators in heart failure. Mention adverse effects of digoxin. Describe role of furosemide in acute pulmonary oedema.
- Q. 5. (ii)** Problem based question: (1 x 4 = 04)
- A 25 year old female is complains of evening rise of temperature, fatigue, loss of appetite, weight loss and cough with expectoration. X-ray chest and sputum examination reveal infection by mycobacterium tuberculosis.
- Mention the antitubercular drugs to be used in this patient.
 - Mention the regime for treatment of this case.
 - If patient develops jaundice during the course of therapy with alanine aminotransferase level more than three times the normal, then which antitubercular drugs can be safely given?
 - If this woman wants to avoid pregnancy, then what advice will you give?
- Q. 6.** Write short notes on: (2 x 4 = 08)
- Long acting female contraceptives.
 - Classification of anti diabetic drugs on the basis of their mechanism of action.
 - Absiximab
 - Bisphosphonates

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2014**PHARMACOLOGY
PAPER – SECOND (MCQ)****Time allotted for MCQ – 20 minutes****Set - C****Q. 1. Multiple Choice questions ((Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Quinine in treatment of chloroquine resistant falciparum malaria is NOT used with:
 - a. Clindamycin
 - b. Mefloquine
 - c. Doxycycline
 - d. Sulfadoxine – pyrimethamine
2. Following is NOT an immunosuppressant drug:
 - a. Tacrolimus
 - b. Azathioprine
 - c. Levamisole
 - d. Cyclophosphamide
3. Following is NOT an adverse effect of prednisolone:
 - a. Hyperglycemia
 - b. Oedema
 - c. Alkalosis
 - d. Hyperkalemia
4. Diuretic causing hyperkalemia is:
 - a. Furosemide
 - b. Spironolactone
 - c. Acetazolamide
 - d. Polythiazide
5. Dermatophyte (ring worm) infection is treated by:
 - a. Amphotericin B
 - b. Griseofulvin
 - c. Flucytosine
 - d. Natamycin
6. Vitamin which reduces effectiveness of levodopa in parkinsonism is:
 - a. Riboflavin
 - b. Niacin
 - c. Pyridoxine
 - d. Ascorbic acid
7. Propranolol is contraindicated in:
 - a. Typical angina
 - b. Unstable angina
 - c. Prinzmetal angina
 - d. Acute myocardial infarction
8. Drug NOT effective in intestinal amoebiasis is:
 - a. Chloroquine
 - b. Metronidazole
 - c. Diloxanide furoate
 - d. Diiodohydroxyquin
9. Drug having positive inotropic effect with negative chronotropic effect is:
 - a. Adrenaline
 - b. Dopamine
 - c. Propranolol
 - d. Digoxin
10. Drug effective against pseudomonas aeruginosa is:
 - a. Ceftazidime
 - b. Ampicillin clavulanic acid
 - c. Clarithromycin
 - d. Doxycycline
11. Following is NOT a rational antibacterial drug combination:
 - a. Sulfamethoxazole + trimethoprim
 - b. Imipenem + cilastatin
 - c. Ampicillin + cloxacillin
 - d. Amoxycillin + clavulanic acid
12. Drug which facilitates drainage of aqueous humour in glaucoma is:
 - a. Betaxolol
 - b. Dorzolamide
 - c. Brimonidine
 - d. Latanoprost
13. Uterine stimulant used for management of post partum breast engorgement is:
 - a. Ergometrine
 - b. Oxytocin
 - c. Prostaglandin E
 - d. Ethacridine
14. Idiosyncratic aplastic anemia is an adverse effect of:
 - a. Tetracycline
 - b. Penicillin G
 - c. Chloramphenicol
 - d. Erythromycin
15. Drug used to treat iron deficiency anemia in presence of malabsorption syndrome is:
 - a. Ferrous sulphate
 - b. Iron dextran
 - c. Ferrous fumarate
 - d. Ferrous gluconate
16. Antiretroviral drug enfuvirtide is a:
 - a. Nucleoside reverse transcriptase inhibitor
 - b. Non-nucleoside reverse transcriptase inhibitor
 - c. Fusion inhibitor
 - d. Protease inhibitor

M.B.B.S. SECOND PROF. EXAMINATION, JUNE/JULY - 2014
PHARMACOLOGY
PAPER - SECOND

[Time allotted: Three hours]

Note: Attempt all Questions.

[Max Marks: 40]

Draw suitable diagrams wherever necessary.

- Q. 1.** Multiple choice questions- separate sheet given ($\frac{1}{2} \times 16 = 08$)
- Q. 2.** Give Reasons: (1 x 4 = 04)
- Monitoring of anticoagulant therapy with Warfarin
 - Mefloquine use in resistant falciparum malaria
 - Chloroquine use in amoebic liver abscess but not in intestinal amoebiasis
 - Combination of Statins with ezetimibe in treatment of hypercholesterolemia
- Q. 3.** Fill in the blanks: (1 x 4 = 04)
- Methanamine used for lower urinary tract infections acts by conversion toin..pH.
 - Metformin is commonly used oral antidiabetic in Obese Diabetic -2 patients because it produces
 - The drug of choice in pseudo membranous colitis induced by Clostridium difficile is.....
 - III generation cephalosporins are preferred agents in Gm-ve aerobic bacterial Meningitis because
- Q. 4.** Write in brief about (with one example): (2 x 4 = 08)
- Surgical antimicrobial prophylaxis
 - Nosocomial infection
 - Immunostimulants
 - Antiplatelet drugs
- Q. 5. (i)** Classify antithyroid drugs. Describe mechanism of action therapeutic status and adverse effects of carbimazole. (04)
- Q. 5. (ii)** Problem based question: (1+1+1+1 = 04)
- A apparently healthy patient aged 28 yrs developed sore throat with yellowish discharge, fever and tenderness in the throat for four days. On examination tonsils were enlarged, inflamed with yellowish purulent discharge with bacteriological diagnosis of Beta hemolytic streptococcal infection. The patient was put on oral Ofloxacin 400 mg twice a day. Patient next day complained of dizziness, hallucinations, agitation and delirium.
- Comment on the rationality of the antimicrobial drug prescribed.
 - What is the further management of the case
 - What are the other ADRs of Ofloxacin . Write in general, two contraindications of its use.
 - What should be prescribed for fever and pain?
- Q. 6.** Write short notes on: (2 x 4 = 08)
- Sodium Nitroprusside
 - Isosorbide mononitrate
 - Furosemide
 - Sotalol

M.B.B.S. SECOND PROF. EXAMINATION, JUNE/JULY - 2014**PHARMACOLOGY****PAPER – SECOND (MCQ)****Time allotted for MCQ – 20 minutes****SET - C****Q. 1. Multiple Choice questions (Encircle the single best response)****(0.5 x 16 = 08)**

1. Drug that can tackle MRSA systemic infection is:
 - a. Amoxicillin
 - b. Cefazolin
 - c. Vancomycin
 - d. Imipenem + cilastatin
2. Most effective drug for uncomplicated gonorrhea:
 - a. Ceftriaxone
 - b. Pencillin G
 - c. Amoxicillin
 - d. Gentamicin
3. Drug of choice against bacteroid fragilis infection:
 - a. Aztronam
 - b. Clindamicin
 - c. Gentamicin
 - d. Azithromycin
4. Acquired Gentamicin resistance can be treated by:
 - a. Amikacin
 - b. Phenoxymethyl Penicillin
 - c. Erythromycin
 - d. Linezolid
5. Prophylaxis of pneumocystitis pneumonia in a AIDS patient is:
 - a. Trimethoprim
 - b. Ciprofloxacin
 - c. Clindamicin
 - d. Cotrimoxazole
6. A patient on antitubercular drugs complains of neuropathy most likely due to:
 - a. Rifampicin
 - b. INH
 - c. Ethambutol
 - d. Streptomycin
7. Antitubercular drug induced neuropathy could be treated with:
 - a. Niacin
 - b. Riboflavin
 - c. Pyridoxine
 - d. Folic acid
8. Least drug interactions are expected from which of the following antifungal azoles:
 - a. Fluconazole
 - b. Ketoconazole
 - c. Posaconazole
 - d. Voreconazole
9. Most suitable treatment of dermatophyte infections is with:
 - a. Terbinafine
 - b. Griseofulvin
 - c. Amphoterecin B
 - d. Nystatin
10. All of the following are absolute contraindications of use of the combined oral contraceptive pills EXCEPT:
 - a. History of thromboembolic disease
 - b. Congenital hyperlipidaemia
 - c. Suspected Carcinoma breast
 - d. Endometriosis
11. Which of the following is antiestrogenic?
 - a. Danazol
 - b. Clomiphene
 - c. Progesterone
 - d. Norgestrel
12. Drug of choice in Addison's disease is:
 - a. Prednisolone
 - b. Hydrocortisone
 - c. Dexamethasone
 - d. Deflazacort
13. Long term treatment with corticosteroid results in:
 - a. Resorption of bone matrix
 - b. Decreased vit-D activation
 - c. Decreased calcium loss in urine
 - d. Increase in Calcium absorption from GIT
14. Corticosteroid causes all of the following EXCEPT:
 - a. Hyperkalemia
 - b. Hyperglycemia
 - c. myopathy
 - d. Neuropsychiatric symptoms
15. Longest acting insulin preparation is:
 - a. Insulin glargine
 - b. Insulin glulisine
 - c. Insulin lispro
 - d. Insulin aspart
16. Which of the following drugs causes bone pain and osteomalacia when administered chronically?
 - a. Risedronate
 - b. Teriparatide
 - c. Calcitonin
 - d. Etidronate

Regn. No.....

Paper Code: 241

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2015
PHARMACOLOGY
PAPER - FIRST

[Time allotted: Three hours]

[Max Marks: 40]

Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given

($\frac{1}{2} \times 16 = 08$)

Q. 2. Give Reasons:

(1 x 4 = 04)

- Aspirin should be discontinued at least 7 days prior to surgery
- Atropine is contraindicated in Glaucoma
- Neostigmine is used in Myasthenia Gravis
- Alpha -1 antagonists are useful in BPH

Q. 3. Problem based question:

(1 x 4 = 04)

A 50 yr old male complains of difficulty in walking and tremors. His colleagues at office mention that he has developed an expressionless face and has a stooped posture. He has been diagnosed as an early case of Parkinsonism

- What is the Drug of Choice for this patient? What is the mechanism of action of this drug?
- Can this drug be given in combination therapy? If Yes, then which drug is usually combined and why?
- What is wearing off effect? How can it be treated?
- Name Dopamine agonist drugs used to treat this condition.

Q. 4. Write in brief:

(2 x 4 = 08)

- Half life ($t_{1/2}$)
- Drugs for chronic gout.
- Drug synergism with two examples.
- Life saving uses of Adrenaline

Q. 5. (i) Illustrate the Benzodiazepine receptor. What is the Antidote for Benzodiazepine Poisoning? Write therapeutic uses of Benzodiazepines. Name non-benzodiazepine Hypnotics and mention their use.

(04)

(ii) Classify non-steroidal anti-inflammatory drugs. Discuss in detail mechanism of action, therapeutic uses, adverse drug reactions and contraindications of aspirin.

(1+3 = 04)

Q. 6. Write short notes on:

(2 x 4 = 08)

- Bioavailability
- Drug antagonism
- Halothane
- Sublingual route of drug administration

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2015**PHARMACOLOGY****PAPER – FIRST (MCQ)****Time allotted for MCQ – 20 minutes****SET - C****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Short half life of Thiopentone is due to:
 - a. Excretion
 - b. Metabolism
 - c. Spontaneous degradation
 - d. Redistribution
2. 'Second gas effect' is exerted by which of the following gas when co-administered with halothane:
 - a. Nitrous oxide
 - b. Halothane
 - c. Ketamine
 - d. Propofol
3. Therapeutic index is a measure of:
 - a. Safety
 - b. Potency
 - c. Efficacy
 - d. Selectivity
4. Alkalinization of urine is required for decreasing the poisoning due to:
 - a. Barbiturates
 - b. Amphetamine
 - c. Alcohol
 - d. Morphine
5. Longest acting sympathomimetic drug is:
 - a. Salbutamol
 - b. Salmeterol
 - c. Terbutaline
 - d. Isoxsuprine
6. True statement regarding first order kinetics is:
 - a. Rate of elimination is independent of plasma concentration
 - b. A constant proportion of plasma concentration is eliminated per unit time
 - c. Half life increases with dose
 - d. Clearance decreases with dose
7. A psychiatric patient taking medication develops a tremor, thyroid enlargement and leucocytosis. Drug implicated is:
 - a. Clomipramine
 - b. Haloperidol
 - c. Lithium
 - d. Olanzapine
8. Physiological antagonism is found in:
 - a. Isoprenaline and salbutamol
 - b. Isoprenaline and adrenaline
 - c. Isoprenaline and propranolol
 - d. Adrenaline and histamine
9. Malignant hyperthermia is a rare complication of which of the following anesthesia:
 - a. Ketamine
 - b. Thiopentone
 - c. Halothane
 - d. Ether
10. A patient has been diagnosed to be having mania and bipolar illness. Which of the following drugs can be used in this?
 - a. Carbamazepine
 - b. Carisoprodol
 - c. Clomipramine
 - d. Diethylcarbamazine
11. All of the following drugs are inhaled glucocorticoids EXCEPT:
 - a. Ciclesonide
 - b. Beclomethasone
 - c. Prednisolone
 - d. Fluticasone
12. Atypical anxiolytic exert their action on:
 - a. BZD receptors
 - b. BZD and 5-HT_{1A}
 - c. 5-HT_{1A}
 - d. 5-HT₂
13. Which of the following is the preferred agent for endoscopies?
 - a. Ketamine
 - b. Etomidate
 - c. Propofol
 - d. Midazolam
14. Conversion of levodopa to dopamine in periphery causes all EXCEPT:
 - a. Nausea, vomiting
 - b. On off phenomena
 - c. Hypertension
 - d. Cardiac arrhythmia
15. Difference between ergot and non ergot derivatives lies mainly in their:
 - a. Efficacy
 - b. Adverse effects and tolerability
 - c. Potency
 - d. Capacity to be used as monotherapy
16. All of the following are SNRIs EXCEPT:
 - a. Duloxetine
 - b. Venlafaxine
 - c. Doxepin
 - d. Milnacipran

Regn. No.

PHARMACOLOGY

Paper Code: 248

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2015**PHARMACOLOGY****PAPER - SECOND****[Time allotted: Three hours]****[Max Marks: 40]****Note:** Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given**(½ x 16 = 08)****Q. 2.** Give Reasons:**(1 x 4 = 04)**

- Estrogen & Progesterone combination is used as oral contraceptive.
- Tamoxifen is used in breast cancer.
- Cyclosporine is used in renal transplantation.
- Terbinafine is the drug of choice for dermatophytes.

Q. 3. Problem based question:**(1+1+1+1 = 04)**

A 30 year old male is suffering from fever with chills on alternate days without any urinary complaints. Examination reveals splenomegaly. Fever is still continuing even after giving full course of chloroquine. Blood film examination reveals infection by plasmodium falciparum.

- How will you treat this patient? Describe the preferred drug regimen for this patient.
- Describe two most common adverse effects of Chloroquine.
- Write two other therapeutic uses of Chloquine.
- Is there any need to give gametocidal therapy to the patient? If yes, what drug is used for this purpose?

Q. 4. Write in brief :**(2 x 4 = 08)**

- Thiazide diuretics.
- Comparison between unfractionated & LMW heparin.
- Drug therapy of anaerobic bacterial infections.
- Beta blockers in Myocardial Infarction.

Q. 5. (i) Structured question:**(1 x 4 = 4)**

- Classify antihypertensive drugs.
- Describe mechanism of action of Enalapril in hypertension.
- Why Amlodipine is better than Nifedipine as antihypertensive agent?
- Enumerate adverse effects of Propranolol.

(ii) Classify semisynthetic penicillins and write their therapeutic indications. Write the rationale of combination of Tazobactam with Piperacillin.

(3+1 = 04)**Q. 6.** Write short notes on:**(2 x 4 = 08)**

- Adverse effects of corticosteroids.
- Mechanism of action of drugs used in hyperthyroidism.
- Therapeutic uses of gentamicin.
- Insulin lispro.

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2015**PHARMACOLOGY****PAPER – SECOND (MCQ)****Time allotted for MCQ – 20 minutes****SET - B****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Long acting insulin analogue is:
 - a. Insulin glulisine
 - b. Insulin glargine
 - c. Insulin lispro
 - d. Insulin aspart
2. Drug used for prevention of premature labor is:
 - a. Oxytocin
 - b. Ritodrine
 - c. Prostaglandin F2 α
 - d. Ergometrine
3. Aspirin is used in acute myocardial infarction due to its:
 - a. Analgesic action
 - b. Anticoagulant action
 - c. Thrombolytic action
 - d. Antithrombotic action
4. Longest acting penicillin is:
 - a. Ticarcillin
 - b. Cloxacillin
 - c. Benzathine penicillin
 - d. Amoxicillin
5. Beri Beri is treated by:
 - a. Riboflavin
 - b. Thiamine
 - c. Pyridoxine
 - d. Niacin
6. Antileprotic drug effective in lepra reaction also is:
 - a. Clofazimine
 - b. Dapsone
 - c. Rifampicin
 - d. Minocycline
7. Drug effective in treatment of neurocysticercosis is:
 - a. Niclosamide
 - b. Albendazole
 - c. Mebendazole
 - d. Pyrantel pamoate
8. Following is NOT the adverse effect of aminoglycoside antibiotic:
 - a. Neuromuscular blockade
 - b. Hepatotoxicity
 - c. Ototoxicity
 - d. Nephrotoxicity
9. Following is NOT the adverse effect of nitroglycerin:
 - a. Headache
 - b. Flushing
 - c. Postural hypotension
 - d. Bradycardia
10. Vitamin K is used to treat overdose toxicity of:
 - a. Streptokinase
 - b. Enoxaparin
 - c. Warfarin
 - d. Clopidogrel
11. Antifungal drug with antiandrogenic action is:
 - a. Amphotericin B
 - b. Griseofulvin
 - c. Flucytosine
 - d. Ketoconazole
12. Calcium channel blocker used in management of sub-arachnoid haemorrhage is:
 - a. Diltiazem
 - b. Nifedipine
 - c. Nimodipine
 - d. Amlodipine
13. The drug NOT included in 3 drug regime for post exposure prophylaxis of HIV in high risk patients is:
 - a. Didanosine
 - b. Indinavir
 - c. Zidovudine
 - d. Lamivudine
14. Broad spectrum antiarrhythmic drug is:
 - a. Adenosine
 - b. Lignocaine
 - c. Amiodarone
 - d. Verapamil
15. Idiopathic hypercalciuria is treated by:
 - a. Frusemide
 - b. Acetazolamide
 - c. Mannitol
 - d. Hydrochlorothiazide
16. Pernicious anemia is treated by:
 - a. Cyanocobalamine
 - b. Folic acid
 - c. Ferrous sulphate
 - d. Pyridoxine

M.B.B.S. SECOND PROF. EXAMINATION, JUNE - 2015
PHARMACOLOGY
PAPER – FIRST

[Time allotted: Three hours]

[Max Marks: 40]

Note: Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given

(½ x 16 = 08)

Q. 2. Give Reasons:

(1 x 4 = 04)

- a. Day time sedation with diazepam
- b. Serotonin syndrome
- c. Short action of Atracurium
- d. Active mydriasis produced by Phenylephrine

Q. 3. Problem based question:

(1 x 4 = 04)

A 40 yr old man complains of a sudden onset of painful great toe. His uric acid levels were found to be 7.5 mg/ml. He had a similar episode twice in the past. The physician prescribed him three tablets of Diclofenac sodium 50 mg to be taken 8 hrly apart on the first day and added 100mg Allopurinol daily to his prescription from next day, following which the pain worsened.

- a. Why was Diclofenac prescribed to this patient?
- b. Why was there worsening of the pain?
- c. What are the adverse effects of Allopurinol that may require stoppage of Allopurinol?
- d. Can we use aspirin in place of Diclofenac in this patient?

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Inhalational steroids
- b. Omeprazole
- c. Xylocaine
- d. Succinylcholine

Q. 5. (i) Enumerate four drug classes with an example of each used for treatment of glaucoma. Describe the mechanism of action, adverse effects and therapeutic status of Latanoprost in open angle glaucoma.

(04)

(ii) Classify anti-epileptic drugs on the basis of their mechanism of action. Write therapeutic uses, adverse effects and drug interactions of Sodium Valproate.

(2+2 = 04)

Q. 6. Write in brief about:

(2 x 4 = 08)

- a. Cumulative toxicity of a drug
- b. Prodrug
- c. Therapeutic window phenomenon
- d. Tachyphylaxis

M.B.B.S. SECOND PROF. EXAMINATION, JUNE - 2015
PHARMACOLOGY
PAPER – FIRST (MCQ)

Time allotted for MCQ – 20 minutes

Set - A

Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)

(0.5 x 16 = 08)

1. Termination of effects of thiopentone Sodium is due to:
 - a. Redistribution
 - b. Metabolism
 - c. Renal excretion
 - d. Hofmann degradation
2. Which benzodiazepine has intermediate duration of action?
 - a. Diazepam
 - b. Triazolam
 - c. Midazolam
 - d. Alprazolam
3. The phenothiazine that produces least Extrapyramidal symptoms is :
 - a. Thioridazine
 - b. Chlorpromazine
 - c. Haloperidol
 - d. Fluphenazine
4. Long term ADR of Phenothiazine is :
 - a. Dystonia
 - b. Akathisia
 - c. Malignant Hyperthermia
 - d. Tardive Dyskinesia
5. Drug of choice for nocturnal enuresis is :
 - a. Amoxapine
 - b. Fluoxetine
 - c. Chlorpromazine
 - d. Imipramine
6. Lithium monitoring is required due to its :
 - a. Low therapeutic index
 - b. Long half life
 - c. Poor absorption
 - d. Preventive use
7. Carbamazepine is used in all of the following conditions except :
 - a. Mania
 - b. Neuropathic pain
 - c. Trigeminal neuralgia
 - d. Petitmal epilepsy
8. Pseudolymphoma is a side effect with chronic use of:
 - a. Carbamazepine
 - b. Phenobarbitone
 - c. Sodium Valproate
 - d. Phenytoin
9. The drug of choice in haloperidol induced Parkinsonism is :
 - a. Levodopa
 - b. Benhexol
 - c. Amantadine
 - d. Bromocriptine
10. MAO inhibitor that is used in parkinsonism :
 - a. Selegiline
 - b. Moclobemide
 - c. Tranylcypromine
 - d. Phenelzine
11. Morphine is used intravenously in :
 - a. Acute left ventricular failure
 - b. Osteonecrosis
 - c. Preanaesthetic medication
 - d. Acute Gout
12. Tolerance is least likely with which effect of morphine :
 - a. Analgesia
 - b. Sedation
 - c. Miotic effect
 - d. Euphoria
13. Buprenorphine acts on mu receptors as :
 - a. Partial agonist
 - b. Pure Antagonist
 - c. Long acting pure agonist
 - d. Inverse agonist
14. More powerful analgesic than morphine is :
 - a. Meperidine
 - b. Pentazocine
 - c. Heroin
 - d. Codeine
15. The drug of choice for ureteric colic is :
 - a. Morphine
 - b. Diclofenac
 - c. Pethidine
 - d. Paracetamol
16. Diffusion Hypoxia is most commonly associated with :
 - a. Halothane
 - b. Nitrous oxide
 - c. Ketamine
 - d. Thiopentone

M.B.B.S. SECOND PROF. EXAMINATION, JUNE - 2015
PHARMACOLOGY
PAPER – SECOND

[Max Marks: 40]

[Time allotted: Three hours]

Note: Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given

(½ x 16 = 08)

Q. 2. Give Reasons:

(1 x 4 = 04)

- a. Danazol in endometriosis
- b. Imipenem used along with cilastatin
- c. Chloroquine in hepatic amoebiasis but not in invasive dysentery.
- d. ACE inhibitors in Congestive heart failure

Q. 3. Problem based question:

(1 x 4 = 04)

Ramesh, a 50 year old mild hypertensive male was stabilized on tablet lisinopril 5 mg OD for the last 6 months. He had intractable, brassy and dry cough. He was prescribed Syrup Diphenhydramine and Tablet Amoxycilline plus clavulanic acid for five days but he was not relieved of this cough. Chest X-ray and sputum examination revealed no abnormality.

- a. Why is the patient not responding to standard treatment of cough?
- b. What is the probable mechanism of this cough?
- c. What can be possible alternative of the intended drug and why so?
- d. What is the mechanism of action of lisinopril in hypertension?

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Amiodarone
- b. Insulin analogues
- c. Cyclosporine
- d. Ciprofloxacin

Q. 5. (i) Classify antimicrobial agents based on the mechanism of action. Write in brief about antimicrobial drug resistance with relevant examples. (04)

(ii) Classify drugs used in Congestive Heart Failure. Describe mechanism of vasodilators in heart failure. Mention adverse effects of digoxin. Describe role of furosemide in pulmonary edema. (04)

Q. 6. Write in brief about:

(2 x 4 = 08)

- a. Glycoprotein IIa/IIIb receptor antagonist
- b. Aromatase inhibitors
- c. Category wise treatment regimen for tuberculosis in tabulated form
- d. Management of Diabetic ketoacidosis

M.B.B.S. SECOND PROF. EXAMINATION, JUNE - 2015
PHARMACOLOGY
PAPER – SECOND (MCQ)

Time allotted for MCQ – 20 minutesSet - A

Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)

(0.5 x 16 = 08)

1. All can be used in lepra reaction EXCEPT:
 - a. Dapsone
 - b. Clofazimine
 - c. Chloroquine
 - d. Steroid
2. Red man syndrome is seen with:
 - a. Linezolid
 - b. Erythromycin
 - c. Lincomycin
 - d. Vancomycin
3. Coronary steal phenomenon is seen with :
 - a. Dipyridamole
 - b. Diltiazem
 - c. Propranolol
 - d. Verapamil
4. All of the following drugs are anti-influenza agents EXCEPT:
 - a. Ribavirin
 - b. Zanamivir
 - c. Interferons
 - d. Rimantadine
5. Corticosteroids are useful in the treatment of :
 - a. Chemotherapy induced vomiting
 - b. Hyperprolactinemia
 - c. Parkinson's disease
 - d. Type II diabetes
6. Which of the following drug is aromatase inhibitor?
 - a. Ormeloxifen
 - b. Fluvestrant
 - c. Anastrozole
 - d. Cyproterone acetate
7. Which of the following drug is least nephrotoxic?
 - a. Streptomycin
 - b. Gentamicin
 - c. Amphotericin B
 - d. Doxycycline
8. Which of the following is not included in urinary antiseptics?
 - a. Nitrofurantoin
 - b. Methenamine
 - c. Fusidic acid
 - d. Nalidixic acid
9. Nevirapine is:
 - a. Non-nucleoside reverse transcriptase inhibitor (NNRTI)
 - b. Nucleoside reverse transcriptase inhibitor (NRTI)
 - c. Protease inhibitor
 - d. Fusion inhibitor
10. Drug of choice for bacterial vaginosis is:
 - a. Metronidazole
 - b. Ampicillin
 - c. Ciprofloxacin
 - d. Fluconazole
11. In a chronic alcoholic patient, which of the following drug can be administered:
 - a. Cefamandole
 - b. Metronidazole
 - c. Chlorpropamide
 - d. Beclomethasone
12. Which of the following steroids has maximum mineralocorticoid activity?
 - a. Fludrocortisone
 - b. Prednisolone
 - c. Dexamethasone
 - d. Triamcinolone
13. All can be given in hypertension in pregnancy EXCEPT:
 - a. Losartan
 - b. Clonidine
 - c. Methyldopa
 - d. Prazosin
14. Which is not the complication of high ceiling diuretics?
 - a. Hypokalemia
 - b. Hypoglycemia
 - c. Hypocalcemia
 - d. Hypomagnesia
15. Ezetimibe acts by:
 - a. Enhanced excretion of bile acids
 - b. Inhibiting absorption of cholesterol
 - c. Inhibiting HMG-Co reductase enzyme
 - d. Activating lipoprotein lipase
16. Acetazolamide acts at this nephron site:
 - a. Ascending thick limb of the loop of Henle
 - b. Distal convoluted tubule
 - c. Proximal convoluted tubule
 - d. Collecting duct

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016**PHARMACOLOGY****PAPER – FIRST (SAQ)****[Time allotted: Three hours]****[Max Marks: 40]****Note:** Attempt all Questions.

Draw suitable diagrams wherever necessary.

- Q. 1.** Multiple choice questions- separate sheet given (½ x 16 = 08)
- Q. 2. Give Reasons:** (1 x 4 = 04)
- Oximes are ineffective for Carbamate antiChEs poisoning.
 - α-1 A selective blockers are preferred over α-1 blockers for treatment of BPH.
 - Adrenaline is the drug of choice for acute hypersensitivity reaction type -1.
 - H. Pylori eradication regimes have more than one drug.
- Q. 3. Problem based question:** (1 x 4 = 04)
- Ramesh, a 30 year old male, presented to the Neurology OPD with h/o fall on ground and his wife narrated that Ramesh fell on the ground, lost consciousness and threw his limbs in a jerky fashion. He had frothy saliva drooling from the corner of his mouth. He regained consciousness after few minutes but had bitten his tongue and appeared confused for an hour or so after this episode.
- How will you treat this case? [DOC and alternative drugs]
 - What is the mechanism of action of the DOC here? Draw a labeled diagram.
 - How will you explain the drug treatment and ensure that he is taking his treatment?
 - What is the role of Antiepileptics in Neuropathic Pain?
- Q. 4. Write short notes on:** (2 x 4 = 08)
- Preanaesthetic Medication.
 - Therapeutic window phenomenon.
 - DMARDS.
 - Treatment of Status Asthmaticus.
- Q. 5. (i)** Classify Antidepressants. How do they differ from Benzodiazepines in their mechanism of action? List three indications each of Benzodiazepines and Antidepressants. (1+2+1 = 04)
- (ii)** What is the Mechanism of action of NSAIDs? Mention their current status in treatment of Migraine. Outline the treatment of Migraine. (1+1+2 = 04)
- Q. 6. Write in brief about:** (2 x 4 = 08)
- Antiemetics that act on Dopaminergic receptors.
 - Transdermal route of drug administration.
 - Central skeletal muscle relaxants.
 - Zero order Kinetics.

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016**PHARMACOLOGY****PAPER – FIRST (MCQ)****Time allotted for MCQ – 20 minutes****Set - B****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. In non-competitive enzyme inhibition there is:
 - a. Increase K_m with no or little change in V_{max}
 - b. Decrease K_m
 - c. Decrease V_{max}
 - d. Increase V_{max}
2. Therapeutic index is a measure of :
 - a. Safety
 - b. Potency
 - c. Efficacy
 - d. Selectivity
3. Agonistic action at which of the following adrenergic receptors results in the reduction of aqueous secretion:
 - a. β_1 receptor
 - b. β_2 receptor
 - c. α_1 receptor
 - d. α_2 receptor
4. Drug of choice for the treatment of acute organophosphate poisoning is:
 - a. Atropine
 - b. Pralidoxime
 - c. Neostigmine
 - d. d-Tubocurarine
5. Which of the following drug is useful in chronic gout but is NOT a Uricosuric agent?
 - a. Probenecid
 - b. Phenylbutazone
 - c. Sulfipyrazone
 - d. Allopurinol
6. Select the diuretic that is most effective in acute congestive glaucoma:
 - a. Indapamide
 - b. Amiloride
 - c. Mannitol
 - d. Furosemide
7. Most important receptor involved in chemotherapy induced vomiting is:
 - a. Histamine H1 receptor
 - b. Serotonin 5-HT₃ receptor
 - c. Dopamine D2 receptor
 - d. Opioid μ receptor
8. NSAID lacking anti-inflammatory action is:
 - a. Paracetamol
 - b. Ibuprofen
 - c. Diclofenac sodium
 - d. Celecoxib
9. Most specific drug for the treatment of peptic ulcer caused due to chronic use of NSAIDs is:
 - a. Rabeprazole
 - b. Loxatidine
 - c. Misoprostol
 - d. Esomeprazole
10. A patient has been diagnosed to be having mania and bipolar illness. Which of the following drugs can be used in this patient apart from lithium?
 - a. Carbamazepine
 - b. Carisoprodol
 - c. Clomipramine
 - d. Diethylcarbamazine
11. Long term use of Pethidine is avoided because a metabolite of Pethidine is associated with:
 - a. Constipation
 - b. Dependence
 - c. Seizures
 - d. Respiratory depression
12. The β adrenergic blocker that is contra indicated in renal failure is:
 - a. Propranolol
 - b. Metoprolol
 - c. Esmolol
 - d. Atenolol
13. What is the most dangerous effect of belladonna in very young children?
 - a. Dehydration
 - b. Hallucination
 - c. Hypertension
 - d. Hyperthermia
14. Dopamine is used in shock because:
 - a. Increase cardiac output
 - b. Decrease peripheral resistance
 - c. Reno vascular constriction
 - d. Reno vascular dilatation
15. Loading dose of a drug primarily depends on:
 - a. Volume of distribution
 - b. Clearance
 - c. Rate of administration
 - d. Half life
16. Short half life of Thiopentone is due to:
 - a. Excretion
 - b. Metabolism
 - c. Spontaneous degradation
 - d. Redistribution

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016
PHARMACOLOGY
PAPER – FIRST (MCQ)

Time allotted for MCQ – 20 minutesSet - C**Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Which of the following drug is useful in chronic gout but is NOT a Uricosuric agent?
 - a. Probenecid
 - b. Phenylbutazone
 - c. Sulfapyrazone
 - d. Allopurinol
2. Select the diuretic that is most effective in acute congestive glaucoma:
 - a. Indapamide
 - b. Amiloride
 - c. Mannitol
 - d. Furosemide
3. Most important receptor involved in chemotherapy induced vomiting is:
 - a. Histamine H1 receptor
 - b. Serotonin 5-HT₃ receptor
 - c. Dopamine D₂ receptor
 - d. Opioid μ receptor
4. NSAID lacking anti-inflammatory action is:
 - a. Paracetamol
 - b. Ibuprofen
 - c. Diclofenac sodium
 - d. Celecoxib
5. Most specific drug for the treatment of peptic ulcer caused due to chronic use of NSAIDs is:
 - a. Rabeprazole
 - b. Loxatidine
 - c. Misoprostol
 - d. Esomeprazole
6. A patient has been diagnosed to be having mania and bipolar illness. Which of the following drugs can be used in this patient apart from lithium?
 - a. Carbamazepine
 - b. Carisoprodol
 - c. Clomipramine
 - d. Diethylcarbamazine
7. Long term use of Pethidine is avoided because a metabolite of Pethidine is associated with:
 - a. Constipation
 - b. Dependence
 - c. Seizures
 - d. Respiratory depression
8. The β adrenergic blocker that is contra indicated in renal failure is:
 - a. Propranolol
 - b. Metoprolol
 - c. Esmolol
 - d. Atenolol
9. What is the most dangerous effect of belladonna in very young children?
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 - b. Hallucination
 - c. Hypertension
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 - b. Decrease peripheral resistance
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 - b. Clearance
 - c. Rate of administration
 - d. Half life
12. Short half life of Thiopentone is due to:
 - a. Excretion
 - b. Metabolism
 - c. Spontaneous degradation
 - d. Redistribution
13. In non-competitive enzyme inhibition there is:
 - a. Increase K_m with no or little change in V_{max}
 - b. Decrease K_m
 - c. Decrease V_{max}
 - d. Increase V_{max}
14. Therapeutic index is a measure of:
 - a. Safety
 - b. Potency
 - c. Efficacy
 - d. Selectivity
15. Agonistic action at which of the following adrenergic receptors results in the reduction of aqueous secretion:
 - a. β_1 receptor
 - b. β_2 receptor
 - c. α_1 receptor
 - d. α_2 receptor
16. Drug of choice for the treatment of acute organophosphate poisoning is:
 - a. Atropine
 - b. Pralidoxime
 - c. Neostigmine
 - d. d-Tubocurarine

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016**PHARMACOLOGY****PAPER – FIRST (MCQ)****Time allotted for MCQ – 20 minutes****Set - D****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. NSAID lacking anti-inflammatory action is:
 - a. Paracetamol
 - b. Ibuprofen
 - c. Diclofenac sodium
 - d. Celecoxib
2. Most specific drug for the treatment of peptic ulcer caused due to chronic use of NSAIDs is:
 - a. Rabeprazole
 - b. Loxatidine
 - c. Misoprostol
 - d. Esomeprazole
3. A patient has been diagnosed to be having mania and bipolar illness. Which of the following drugs can be used in this patient apart from lithium?
 - a. Carbamazepine
 - b. Carisoprodol
 - c. Clomipramine
 - d. Diethylcarbamazine
4. Long term use of Pethidine is avoided because a metabolite of Pethidine is associated with:
 - a. Constipation
 - b. Dependence
 - c. Seizures
 - d. Respiratory depression
5. The β adrenergic blocker that is contra indicated in renal failure is:
 - a. Propranolol
 - b. Metoprolol
 - c. Esmolol
 - d. Atenolol
6. What is the most dangerous effect of belladonna in very young children?
 - a. Dehydration
 - b. Hallucination
 - c. Hypertension
 - d. Hyperthermia
7. Dopamine is used in shock because:
 - a. Increase cardiac output
 - b. Decrease peripheral resistance
 - c. Reno vascular constriction
 - d. Reno vascular dilatation
8. Loading dose of a drug primarily depends on:
 - a. Volume of distribution
 - b. Clearance
 - c. Rate of administration
 - d. Half life
9. Short half life of Thiopentone is due to:
 - a. Excretion
 - b. Metabolism
 - c. Spontaneous degradation
 - d. Redistribution
10. In non-competitive enzyme inhibition there is:
 - a. Increase K_m with no or little change in V_{max}
 - b. Decrease K_m
 - c. Decrease V_{max}
 - d. Increase V_{max}
11. Therapeutic index is a measure of :
 - a. Safety
 - b. Potency
 - c. Efficacy
 - d. Selectivity
12. Agonistic action at which of the following adrenergic receptors results in the reduction of aqueous secretion:
 - a. β_1 receptor
 - b. β_2 receptor
 - c. α_1 receptor
 - d. α_2 receptor
13. Drug of choice for the treatment of acute organophosphate poisoning is:
 - a. Atropine
 - b. Pralidoxime
 - c. Neostigmine
 - d. d-Tubocurarine
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 - b. Phenylbutazone
 - c. Sulfinpyrazone
 - d. Allopurinol
15. Select the diuretic that is most effective in acute congestive glaucoma:
 - a. Indapamide
 - b. Amiloride
 - c. Mannitol
 - d. Furosemide
16. Most important receptor involved in chemotherapy induced vomiting is:
 - a. Histamine H1 receptor
 - b. Serotonin 5-HT₃ receptor
 - c. Dopamine D2 receptor
 - d. Opioid μ receptor

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016
PHARMACOLOGY
PAPER – SECOND (SAQ)

[Time allotted: Three hours]

[Max Marks: 40]

Note: Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given

(½ x 16 = 08)

Q. 2. Give Reasons:

(1 x 4 = 04)

- a. GTN is used in acute angina.
- b. Spironolactone is used in refractory edema.
- c. Laboratory monitoring is not needed with LMWHs.
- d. Clomiphene is used in infertility.

Q. 3. Problem based question:

(1+1+1+1 = 04)

A 69 year old female was admitted to the hospital with chief complaints of generalized malaise, anorexia, vomiting and confusion. She gave a history of Congestive heart failure and taking Thiazide and Digoxin 250 mcg/day. Her plasma concentration of Digoxin was found out to be 1.1 ng/ml two days ago. On admission, her serum potassium level was 2.9 mmol/l.

- a. What is the basis of development of these symptoms?
- b. What corrective measures should be taken for above mentioned symptoms?
- c. What should be the normal plasma digoxin level?
- d. Mention two other drugs that can alter serum potassium level.

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Long acting dihydropyridines
- b. 3rd generation cephalosporins
- c. ACE inhibitors in myocardial infarction
- d. Insulin sensitizers

Q. 5. (i) Define MDR-Tuberculosis. Write RNTCP regimen for MDR-Tuberculosis patients. What is the role of corticosteroids in tubercular patients? (1+2+1 = 04)

(ii) Classify the drugs for clinical cure of malaria. Write treatment regimen of severe & complicated falciparum malaria. (2+2 = 04)

Q. 6. Write in brief :

(2 x 4 = 08)

- a. Adverse effects of Tetracyclines
- b. Calcineurin inhibitors
- c. Ketoconazole
- d. Adverse effects of oral contraceptives

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016**PHARMACOLOGY****PAPER – SECOND (MCQ)****Time allotted for MCQ – 20 minutes****SET - B****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Safest antimalarial during pregnancy:
 - a. Mefloquine
 - b. Pyrimethamine
 - c. Proguanil
 - d. Quinine
2. Drug of choice of meningococcal meningitis:
 - a. Penicillin
 - b. Erythromycin
 - c. Septran
 - d. Rifampicin
3. Intravenous insulin therapy can cause:
 - a. Hypokalaemia
 - b. Hyperkalaemia
 - c. Hyponatraemia
 - d. Hypernatraemia
4. Therapeutic plasma level of Digoxin is:
 - a. 0.1-0.3ng/ml
 - b. 0.8-1.5ng/ml
 - c. 1.2-2ng/ml
 - d. >2.4ng/ml
5. Bosentan is:
 - a. Endothelin receptor antagonist
 - b. Estrogen receptor antagonist
 - c. Phosphodiesterase inhibitor
 - d. Serotonin receptor antagonist
6. Leucovorin is used for:
 - a. Methotrexate toxicity
 - b. Cyclophosphamide toxicity
 - c. Cisplatin toxicity
 - d. Daunorubicin toxicity
7. All of the following drugs may precipitate diabetes except:
 - a. Thiazide diuretic
 - b. Glucocorticoids
 - c. Pramlintide
 - d. Tacrolimus
8. Antiviral drug of choice for swine flu is:
 - a. Acyclovir
 - b. Foscarnet
 - c. Fanciclovir
 - d. Oseltamivir
9. All of the following statement are true about metronidazole except:
 - a. It is a prodrug
 - b. Effective against anaerobic infection
 - c. Causes disulfiram reaction with alcohol
 - d. It is a tasteless compound
10. An orange dye used as urinary analgesic is:
 - a. Nitrofurantoin
 - b. Phenazopyridine
 - c. Clofazimine
 - d. Norfloxacin
11. Action of adenosine include the following except:
 - a. Depression of AV node
 - b. Coronary vasodilatation
 - c. Bronchodilatation
 - d. Fall in BP
12. Which of the following is not an attribute of Amlodipine?
 - a. Generation of an active metabolite
 - b. Large volume of distribution
 - c. High consistent oral bioavailability
 - d. Long elimination t_{1/2}
13. Following drug reduces the effect of oral anticoagulant:
 - a. Broad spectrum antibiotic
 - b. Cimetidine
 - c. Aspirin
 - d. Oral contraceptive
14. Drug of choice for MRSA is:
 - a. Cabenicillin
 - b. Gentamicin
 - c. Vancomycin
 - d. Piperacillin
15. HDL is increased specifically by:
 - a. Lovastatin
 - b. Niacin
 - c. Gemfibrozil
 - d. Ezetimibe
16. Nevirapine is a:
 - a. Protease inhibitor
 - b. Nucleoside reverse transcriptase inhibitor
 - c. Non nucleoside reverse transcriptase inhibitor
 - d. Fusion inhibitor

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016
PHARMACOLOGY
PAPER – SECOND (MCQ)

Time allotted for MCQ – 20 minutes**SET - C****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Bosentan is:
 - a. Endothelin receptor antagonist
 - b. Estrogen receptor antagonist
 - c. Phosphodiesterase inhibitor
 - d. Serotonin receptor antagonist
2. Leucovorin is used for:
 - a. Methotrexate toxicity
 - b. Cyclophosphamide toxicity
 - c. Cisplatin toxicity
 - d. Daunorubicin toxicity
3. All of the following drugs may precipitate diabetes except:
 - a. Thiazide diuretic
 - b. Glucocorticoids
 - c. Pramlintide
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4. Antiviral drug of choice for swine flu is:
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 - c. Fanciclovir
 - d. Oseltamivir
5. All of the following statement are true about metronidazole except:
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 - a. Broad spectrum antibiotic
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 - c. Gemfibrozil
 - d. Ezetimibe
12. Nevirapine is a:
 - a. Protease inhibitor
 - b. Nucleoside reverse transcriptase inhibitor
 - c. Non nucleoside reverse transcriptase inhibitor
 - d. Fusion inhibitor
13. Safest antimalarial during pregnancy:
 - a. Mefloquine
 - b. Pyrimethamine
 - c. Proguanil
 - d. Quinine
14. Drug of choice of meningococcal meningitis:
 - a. Penicillin
 - b. Erythromycin
 - c. Septran
 - d. Rifampicin
15. Intravenous insulin therapy can cause:
 - a. Hypokalaemia
 - b. Hyperkalaemia
 - c. Hyponatraemia
 - d. Hypernatraemia
16. Therapeutic plasma level of Digoxin is:
 - a. 0.1-0.3ng/ml
 - b. 0.8-1.5ng/ml
 - c. 1.2-2ng/ml
 - d. >2.4ng/ml

M.B.B.S. SECOND PROF. EXAMINATION, JANUARY - 2016
PHARMACOLOGY
PAPER – SECOND (MCQ)

Time allotted for MCQ – 20 minutes**SET - D****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Antiviral drug of choice for swine flu is:
 - a. Acyclovir
 - b. Foscarnet
 - c. Fanciclovir
 - d. Oseltamivir
2. All of the following statement are true about metronidazole except:
 - a. It is a prodrug
 - b. Effective against anaerobic infection
 - c. Causes disulfiram reaction with alcohol
 - d. It is a tasteless compound
3. An orange dye used as urinary analgesic is:
 - a. Nitrofurantoin
 - b. Phenazopyridine
 - c. Clofazimine
 - d. Norfloxacin
4. Action of adenosine include the following except:
 - a. Depression of AV node
 - b. Coronary vasodilatation
 - c. Bronchodilatation
 - d. Fall in BP
5. Which of the following is not an attribute of Amlodipine?
 - a. Generation of an active metabolite
 - b. Large volume of distribution
 - c. High consistent oral bioavailability
 - d. Long elimination t_{1/2}
6. Following drug reduces the effect of oral anticoagulant:
 - a. Broad spectrum antibiotic
 - b. Cimetidine
 - c. Aspirin
 - d. Oral contraceptive
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 - d. Piperacillin
8. HDL is increased specifically by:
 - a. Lovastatin
 - b. Niacin
 - c. Gemfibrozil
 - d. Ezetimibe
9. Nevirapine is a:
 - a. Protease inhibitor
 - b. Nucleoside reverse transcriptase inhibitor
 - c. Non nucleoside reverse transcriptase inhibitor
 - d. Fusion inhibitor
10. Safest antimalarial during pregnancy:
 - a. Mefloquine
 - b. Pyrimethamine
 - c. Proguanil
 - d. Quinine
11. Drug of choice of meningococcal meningitis:
 - a. Penicillin
 - b. Erythromycin
 - c. Septran
 - d. Rifampicin
12. Intravenous insulin therapy can cause:
 - a. Hypokalaemia
 - b. Hyperkalaemia
 - c. Hyponatraemia
 - d. Hypernatraemia
13. Therapeutic plasma level of Digoxin is:
 - a. 0.1-0.3ng/ml
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 - a. Endothelin receptor antagonist
 - b. Estrogen receptor antagonist
 - c. Phosphodiesterase inhibitor
 - d. Serotonin receptor antagonist
15. Leucovorin is used for:
 - a. Methotrexate toxicity
 - b. Cyclophosphamide toxicity
 - c. Cisplatin toxicity
 - d. Daunorubicin toxicity
16. All of the following drugs may precipitate diabetes except:
 - a. Thiazide diuretic
 - b. Glucocorticoids
 - c. Pramlintide
 - d. Tacrolimus

M.B.B.S. SECOND PROF. EXAMINATION, APRIL/ MAY- 2016**PHARMACOLOGY****PAPER – FIRST (SAQ)****[Time allotted: Three hours]****[Max Marks: 40]****Note:** Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given**(½ x 16 = 08)****Q. 2. Give Reasons:****(1 x 4 = 04)**

- Abrupt discontinuation of Beta blockers is avoided in angina
- Selegiline is used in Parkinsonism
- Oximes are not used in carbamate poisoning
- Dantrolene is used in Malignant Hyperthermia

Q. 3. Problem based question:**(1 x 4 = 04)**

A young man is brought to emergency in an unconscious condition. He has shallow respiration at a rate of 6-8 breath /min, with bilateral pin point pupils. There are needle marks on his legs and hand. He also has cold clammy skin and bradycardia. He is diagnosed to be a heroin addict.

- What should be given for acute management of this patient?
- What precautions are required while administering the drug?
- Why there are pin point pupils? Why at times dilatation of pupil is observed with meperidine poisoning?
- What will you prescribe for long term treatment of this addiction?

Q. 4. Write short notes on:**(2 x 4 = 08)**

- Steady state concentration of the drug
- Therapeutic index
- Pharmacokinetic antagonism
- Prodrug

Q. 5. (i) Classify antipsychotic agents. Describe the mechanism of action and adverse effects of Haloperidol.**(04)****(ii) Classify Anticholinesterase drugs. Write the drug management of Myasthenia Gravis.****(04)****Q. 6. Write in brief about:****(2 x 4 = 08)**

- Misoprostol
- Indomethacin
- Salbutamol
- Ketamine

M.B.B.S. SECOND PROF. EXAMINATION, APRIL/ MAY- 2016**PHARMACOLOGY
PAPER – FIRST (MCQ)****Time allotted for MCQ – 20 minutes****Set - A****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. Which of the following is used in drug induced Parkinson disease?
 - a. Benserzide
 - b. Levodopa
 - c. Bromocriptine
 - d. Seleziline
2. All of the following have a narrow margin of safety EXCEPT:
 - a. Epinephrine
 - b. Morphine
 - c. Thiopentone
 - d. Naproxen
3. Which of the drug produces non-competitive blockade at receptors?
 - a. Atropine
 - b. Prazosin
 - c. Phenoxybenzamine
 - d. Propranolol
4. Features of atropine poisoning include all of the following EXCEPT
 - a. Mydriasis
 - b. Hallucinations
 - c. Dry mouth
 - d. Hypothermia
5. Which of the following is labeled as indirectly acting sympathomimetic?
 - a. Ephedrine
 - b. Methoxamine
 - c. Norepinephrine
 - d. Dobutamine
6. Which of the following is an irreversible cholinesterase inhibitor?
 - a. Edrophonium
 - b. Neostigmine
 - c. Donepezil
 - d. Echothiophate
7. Long acting cardioselective beta -blocker is:
 - a. Metoprolol
 - b. Acebutolol
 - c. Esmolol
 - d. Atenolol
8. Major problem with sodium valproate use is:
 - a. Hepatotoxicity
 - b. Enterocolitis
 - c. Cardiotoxicity
 - d. Nephrotoxicity
9. Adverse drug reactions of Lithium include all EXCEPT:
 - a. Weight gain
 - b. Coarse tremors
 - c. Polyurea
 - d. Diarrhoea
10. The shortest acting benzodiazepine is:
 - a. Alprazolam
 - b. Triazolam
 - c. Temezepam
 - d. Chlordiazepoxide
11. Which of the antihistamine has recently withdrawn from the market?
 - a. Terfenadine
 - b. Loratidine
 - c. Promethazine
 - d. Meclizine
12. The drug of choice for nocturnal enuresis is:
 - a. Amoxapine
 - b. Fluoxatine
 - c. Chlorpromazine
 - d. Imipramine
13. Carbamazepine is used in all of the following conditions EXCEPT:
 - a. Mania
 - b. Schizophrenia
 - c. Partial epilepsy
 - d. Neuropathy
14. Phenytoin is used in all of the following conditions EXCEPT:
 - a. Grand mal epilepsy
 - b. Petit mal epilepsy
 - c. Psychomotor epilepsy
 - d. Focal epilepsy
15. Diffusion Hypoxia is commonly seen with
 - a. Halothane
 - b. Nitrous oxide
 - c. Ketamine
 - d. Diethyl ether
16. Local anaesthetics act by blocking which channel
 - a. Calcium
 - b. Potassium
 - c. Sodium
 - d. Chloride

M.B.B.S. SECOND PROF. EXAMINATION, APRIL/ MAY- 2016**PHARMACOLOGY
PAPER – FIRST (MCQ)****Time allotted for MCQ – 20 minutes****Set - B****Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)****(0.5 x 16 = 08)**

1. The shortest acting benzodiazepine is:
 - a. Alprazolam
 - b. Triazolam
 - c. Temezepam
 - d. Chlordiazepoxide
2. Which of the antihistamine has recently withdrawn from the market?
 - a. Terfenadine
 - b. Loratidine
 - c. Promethazine
 - d. Meclizine
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 - b. Fluoxetine
 - c. Chlorpromazine
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 - a. Halothane
 - b. Nitrous oxide
 - c. Ketamine
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 - c. Sodium
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 - b. Morphine
 - c. Thiopentone
 - d. Naproxen
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 - b. Prazosin
 - c. Phenoxybenzamine
 - d. Propranolol
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 - a. Mydriasis
 - b. Hallucinations
 - c. Dry mouth
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 - c. Donepezil
 - d. Echothiophate
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 - c. Polyurea
 - d. Diarrhoea

M.B.B.S. SECOND PROF. EXAMINATION, APRIL/ MAY - 2016
PHARMACOLOGY
PAPER – SECOND (SAQ)

[Time allotted: Three hours]**[Max Marks: 40]****Note:** Attempt all Questions.

Draw suitable diagrams wherever necessary.

Q. 1. Multiple choice questions- separate sheet given**(½ x 16 = 08)****Q. 2. Give Reasons:****(1 x 4 = 04)**

- a. Amoxicillin is combined with Clavulanic acid
- b. Pyridoxine is given with Isoniazid
- c. Sildenafil is avoided in patients taking nitrates
- d. Morphine is used in Left ventricular failure

Q. 3. Problem based question:**(1 x 4 = 04)**

A 30 year old girl presented to the OPD with intermittent fever with rigor, chills & headache for the past 3 days. Blood smear examination showed presence of intraerythrocytic P. vivax parasites. She was tested for G-6 PD deficiency & prescribed chloroquine & primaquine.

- a. Write the dose & duration of treatment of chloroquine & primaquine for this patient.
- b. What is the rationale for giving primaquine in P. vivax malaria?
- c. What is the importance of G-6PD testing in this case?
- d. What drugs would you have given if the girl had been pregnant?

Q. 4. Write short notes on:**(2 x 4 = 08)**

- a. Potassium sparing diuretics
- b. Centchroman
- c. Amphotericin B
- d. General toxicity of anticancer drugs

Q. 5. (i) Classify anti-anginal drugs. Write the mechanism of action of nitrates in angina. Enumerate the adverse effect of nitrates. Mention two non cardiovascular uses of nitrates. **(04)**

(ii) Classify Aminoglycoside antibiotics. Describe antibacterial mechanism of action, therapeutic uses and adverse effects of Aminoglycosides. **(1+3 = 04)**

Q. 6. Write in brief:**(2 x 4 = 08)**

- a. RAAS system & its modulation by drugs (Illustrate).
- b. Clonidine in hypertension
- c. Tigecycline
- d. Clomiphene citrate

M.B.B.S. SECOND PROF. EXAMINATION, APRIL/ MAY - 2016

**PHARMACOLOGY
PAPER – SECOND (MCQ)**

Time allotted for MCQ – 20 minutes

SET - A

Q. 1. Multiple Choice questions (Darken the single best response in OMR sheet)

(0.5 x 16 = 08)

1. All are rational ARV drug combinations EXCEPT:
 - a. Lamivudine + Stavudine
 - b. Zidovudine + Stavudine
 - c. Lopinavir + Ritonavir
 - d. Tenofovir + Emtricitabine
2. The antithyroid drug preferred for use during pregnancy and lactation is:
 - a. Propylthiouracil
 - b. Methimazole
 - c. Carbimazole
 - d. Radioactive iodine
3. Which of the following drugs should be avoided in patients with CHF?
 - a. ACE inhibitors
 - b. Beta Blockers
 - c. Glitazones
 - d. Diuretics
4. The most common route of administration of insulin is :
 - a. Intradermal
 - b. Subcutaneous
 - c. Intramuscular
 - d. Oral
5. Which of the following disorders is NOT aggravated by corticosteroid therapy?
 - a. Congenital adrenal hyperplasia
 - b. Diabetes mellitus
 - c. Hypertension
 - d. Peptic ulcer
6. Which of the following drugs DO NOT cause hyperprolactinemia?
 - a. Bromocriptine
 - b. Haloperidol
 - c. Reserpine
 - d. Chlorpromazine
7. Which of the following antibiotics acts by inhibiting cell wall synthesis?
 - a. Cefepime
 - b. Aminoglycosides
 - c. Erythromycin
 - d. Doxycycline
8. Drug of choice for treatment of infection caused by methicillin resistant staphylococcus aureus is :
 - a. Macrolides
 - b. Third generation cephalosporins
 - c. Carbapenems
 - d. Glycopeptides
9. Which of the following penicillins is effective against pseudomonas?
 - a. Piperacillin
 - b. Amoxycillin
 - c. Ampicillin
 - d. Oxacillin
10. Which of the following is NOT an established antimicrobial drug synergism at clinical level?
 - a. Amphotericin B and flucytosine is cryptococcal meningitis
 - b. Carbenicillin and gentamicin in pseudomonal infections
 - c. Penicillin and tetracycline in bacterial meningitis
 - d. Trimethoprim and sulfamethoxazole in coliform infections
11. A 30 year old pregnant woman develops tuberculosis. Which of the following antitubercular drugs should not be used?
 - a. INH
 - b. Rifampicin
 - c. Streptomycin
 - d. Ethambutol
12. Which of the following is a fourth generation cephalosporin?
 - a. Ceftriaxone
 - b. Cefaclor
 - c. Cefepime
 - d. Cefuroxime
13. Ethambutol shows the typical adverse effect of:
 - a. Neurotoxicity
 - b. Myelotoxicity
 - c. Optic Neuritis
 - d. Nephrotoxicity
14. Drug used in heparin overdose:
 - a. Protamine sulfate
 - b. Phylloquinone
 - c. Ticlopidine
 - d. Clopidrogel
15. Digoxin toxicity is increased by all EXCEPT :
 - a. Lidocaine
 - b. Quinidine
 - c. Furosemide
 - d. Amitriptyline
16. Beta blockers are antiarrhythmic agents of Vaughan-William's class:
 - a. I
 - b. II
 - c. III
 - d. IV

M.B.B.S. SECOND PROF. EXAMINATION, APRIL/ MAY - 2016

**PHARMACOLOGY
PAPER – SECOND (MCQ)**

Time allotted for MCQ – 20 minutes

SET - B

Q. 1: Multiple Choice questions (Darken the single best response in OMR sheet)

(0.5 x 16 = 08)

1. A 30 year old pregnant woman develops tuberculosis. Which of the following antitubercular drugs should not be used?
 - a. INH
 - b. Rifampicin
 - c. Streptomycin
 - d. Ethambutol
2. Which of the following is a fourth generation cephalosporin?
 - a. Ceftriaxone
 - b. Cefaclor
 - c. Cefepime
 - d. Cefuroxime
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 - b. Myelotoxicity
 - c. Optic Neuritis
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 - d. Clopidogrel
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6. Beta blockers are antiarrhythmic agents of Vaughan-William's class:
 - a. I
 - b. II
 - c. III
 - d. IV
7. All are rational ARV drug combinations EXCEPT:
 - a. Lamivudine + Stavudine
 - b. Zidovudine + Stavudine
 - c. Lopinavir + Ritonavir
 - d. Tenofovir + Emtricitabine
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 - b. Methimazole
 - c. Carbimazole
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 - c. Glitazones
 - d. Diuretics
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 - c. Reserpine
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 - a. Amphotericin B and flucytosine in cryptococcal meningitis
 - b. Carbenicillin and gentamicin in pseudomonal infections
 - c. Penicillin and tetracycline in bacterial meningitis
 - d. Trimethoprim and sulfamethoxazole in coliform infections

PHARMACOLOGY PAPER- FIRST

Note: Attempt all Questions.

Draw suitable diagrams (wherever necessary)

Q. 2. Give Reasons:

(1 x 4 = 04)

- a. Sudden withdrawal of certain drugs is avoided. Give two examples.
- b. Why edrophonium is preferred to differentiate between cholinergic crisis and myasthenic crisis?
- c. Why vasopressor agents are not used for the treatment of hypovolaemic shock?
- d. Whether thiopentone sodium is used alone for endotracheal intubation and why?

Q. 3. Problem based question:

(1 x 4 = 04)

Mr. Ram Kumar, 55 year old male came to emergency department with complaint of pain in left great toe since past 24 hours. On examination the left great toe was found to be erythematous, tender and pain increased on flexion. On biochemical examination his serum creatinine was 1.3 mg/dl and uric acid was 7.5 mg/dl, rest of his blood examination was not significant. He was diagnosed as a case of gout.

- a. Which drug will you prescribe in above mentioned case and why?
- b. Write the mechanism of action of the drug and its major side effects.
- c. What are other treatment options for above mentioned case?
- d. Mention drugs which cause hyperuricaemia.

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Tramadol
- b. Treatment of anxiety neurosis
- c. Adverse effect of TCAs
- d. Dale vasomotor reversal phenomenon

Q. 5. Structured question:

(i) Classify benzodiazepines. Illustrate with suitable diagram mechanism of action of diazepam. Mention three uses of diazepam. Write briefly on non-benzodiazepine sedative hypnotics. (1+1+1+1 = 04)

(ii) Classify drugs for bronchial asthma. Write mechanism of action of inhaled steroids in episode of acute asthma. Write the adverse effects of inhaled steroids and how they can be minimized. Mention drug treatment of chronic asthma. (1+1+1+1 = 04)

Q. 6. Write in brief about:

(2 x 4 = 08)

- a. Sub-lingual route
- b. Carvedilol
- c. Fexofenadine
- d. 5-HT₃ antagonists

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, FEBRUARY - 2017
PHARMACOLOGY
PAPER - FIRST

[Time allotted: Three hours]

[Max Marks: 40]

Q. 1. Multiple Choice questions (attempt all MCQs in the allotted first 15 minutes in the OMR sheet) (½ x 16 = 08)

SET - C

1. Dosage interval depends upon:
 - a. Volume of distribution
 - b. Elimination half life
 - c. Hepatic clearance
 - d. Plasma protein binding
2. Buprenorphine is:
 - a. Full agonist at μ receptor
 - b. Partial agonist at μ receptor
 - c. Full agonist at k receptor
 - d. Partial agonist at k receptor
3. Agonistic action at which of the following adrenergic receptors results in the reduction of aqueous secretion:
 - a. β_1 receptor
 - b. β_2 receptor
 - c. α_1 receptor
 - d. α_2 receptor
4. Which of the following is an atypical antipsychotic?
 - a. Venlafaxine
 - b. Ziprasidone
 - c. Bupropion
 - d. Trazodone
5. Drug induced Parkinsonism should be treated by:
 - a. Ropinirole
 - b. Levodopa
 - c. Procyclidine
 - d. Amantadine
6. Noradrenergic and specific serotonergic antidepressant (NaSSA) is:
 - a. Trazodone
 - b. Mianserin
 - c. Bupropion
 - d. Mirtazapine
7. The primary endogenous substrate for nitric oxide synthase (NOS) is:
 - a. Citrulline
 - b. Arginine
 - c. Heme
 - d. Methionine
8. Pharmacovigilance is used for:
 - a. To monitor drug toxicity
 - b. To monitor unauthorized drug manufacture
 - c. Monitoring of students
 - d. Check costs
9. Induction of microsomal enzymes can result in:
 - a. Tolerance
 - b. Dependence
 - c. Supersensitivity to a drug
 - d. Toxicity of a drug
10. Fastest acting receptor/transduction mechanism is:
 - a. Adenylyl cyclase-cyclic AMP pathway
 - b. Phospholipase C-IP3:DAG pathway
 - c. Intrinsic ion channel operation
 - d. Nuclear receptors
11. All of the following metabolic reactions are catalyzed by microsomal enzymes except:
 - a. Acetylation
 - b. Oxidation
 - c. Reduction
 - d. Glucuronidation
12. Which of the following is most specific drug for the treatment of peptic ulcer caused by NSAIDs?
 - a. Pirenzepine
 - b. Misoprostol
 - c. Ranitidine
 - d. Omeprazole
13. Which of the following drugs can produce extrapyramidal side effects?
 - a. Ranitidine
 - b. Metoclopramide
 - c. Cisapride
 - d. Domperidone
14. Carbamazepine is used in all of the following conditions except:
 - a. Mania
 - b. Neuropathic pain
 - c. Trigeminal neuralgia
 - d. Petitmal epilepsy
15. All of the following when used in the eye can produce cycloplegia except:
 - a. Cyclopentolate
 - b. Homatropine
 - c. Physostigmine
 - d. Atropine
16. Ritodrine is used in the treatment of:
 - a. Parkinsons disease
 - b. Bronchial asthma
 - c. Hypertension
 - d. Premature labor

PHARMACOLOGY PAPER – SECOND

Note: Attempt all Questions.
Draw suitable diagrams (wherever necessary)

Give Reasons:

(1 x 4 = 04)

- a. Penicillin is used for prophylaxis of rheumatic heart disease.
- b. Nifedipine is not preferred as an anti-hypertensive in patients with history of ischemic heart disease.
- c. Estrogen and progesterone combination is better than either drug alone for use as oral contraceptive.
- d. Anticancer drug treatment leads to serious ADRs.

Q. 3. Problem based question:

(1+1+1+1 = 04)

Ganesh, a 50 year old male, presented to the emergency, with h/o severe stabbing pain in left precordium (chest) and a choking sensation. The pain is radiating to left arm and lower jaw.

- a. Outline the treatment for this case.
- b. Describe the mechanism of action of above mentioned drug and its 2 ADRs.
- c. Name the drug that should be given to the patient, preferably within 12 hrs of admission. What is the mechanism of action of this drug?
- d. Name a single drug that you will you prescribe this patient for long term prophylaxis along with its mechanism of action.

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Cyclosporine
- b. Inhaled corticosteroids
- c. Role of ACE-Is in CHF
- d. Anti thyroid drugs

Q. 5. Structured question:

- (i) Classify quinolones. Write their mechanism of action and role in enteric fever treatment. List three indications (besides enteric fever) and three contraindications of their use. (1+2+1 = 04)
- (ii) Name the various types of insulin used for the treatment of diabetes. Write the ADRs of insulin. List the difference between biguanides and sulfonylureas? (1+2+1 = 04)

Q. 6. Write in brief :

(2 x 4 = 08)

- a. Indications of cephalosporins
- b. Adverse effects of heparin
- c. Differences between loop diuretics and spironolactone
- d. Octreotide

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, FEBRUARY - 2017
PHARMACOLOGY
PAPER - SECOND

[Time allotted: Three hours]

[Max Marks: 40]

Q. 1. Multiple Choice questions (attempt all MCQs in the allotted first 15 minutes in the OMR sheet) ($\frac{1}{2} \times 16 = 8$)

SET - B

1. Drug used for both chemoprophylaxis as well as for treatment of malaria is:
 - a. Halofantrine
 - b. Quinine
 - c. Chloroquine
 - d. Sulfonamides
2. Which of these is **NOT** an advantage of artemisinin based combination therapy?
 - a. Rapid clinical and parasitological cure
 - b. Absence of parasite resistance
 - c. Can be routinely used for chemoprophylaxis
 - d. Good tolerability profile
3. Which is the drug of choice of swine flu (H1N1 influenza)?
 - a. Amantadine
 - b. Oseltamivir
 - c. Ribavirin
 - d. Adefovir
4. Why is vitamin B6 usually prescribed with isoniazid (INH)?
 - a. It acts as a cofactor for INH
 - b. It prevents some adverse effects of INH therapy
 - c. Like INH, it has tuberculostatic activity
 - d. It prevents metabolism of INH
5. What is the anti-platelet dose of aspirin?
 - a. 500-750 mg/day
 - b. 2-3 g/day
 - c. 3-5 g/day
 - d. 75-100 mg/day
6. Which of the following progesterone is used in emergency contraception?
 - a. Norgestrel
 - b. Micronised progesterone
 - c. Mifepristone
 - d. Depot medroxyprogesterone acetate
7. OCPs are used for contraception because they:
 - a. Inhibit ovulation
 - b. Enhance gonadotropin release
 - c. Stimulate mid cycle LH surge
 - d. Decrease estrogen synthesis
8. **TRUE** about linezolid is that it is:
 - a. cell wall synthesis inhibitor
 - b. drug of choice for salmonella typhi
 - c. effective for gram positive organisms
 - d. often used in combination with penicillin
9. The drug that inhibits HMG Coenzyme A:
 - a. Fibrates
 - b. Statins
 - c. Cholestyramine
 - d. Probucol
10. Which of the following drugs promotes the release of endogenous insulin?
 - a. Acarbose
 - b. Glipizide
 - c. Metformin
 - d. Pioglitazone
11. The drug frequently used for topical application in burn patients is:
 - a. Silver sulfadiazine
 - b. Fusidic acid
 - c. Tolnaftate
 - d. Tetracyclines
12. Heparin acts by inhibition of activation of:
 - a. Antithrombin III
 - b. Thrombin
 - c. Prothrombin
 - d. Factor Xa
13. **FALSE** statement regarding warfarin is:
 - a. Anticoagulant effect develops immediately
 - b. It is contraindicated in patients of peptic ulcer
 - c. Used for prophylaxis of deep vein thrombosis
 - d. Inhibits synthesis of clotting factors II, VII, IX, X
14. Which of the following drugs is fungistatic?
 - a. Terbinafin
 - b. Amphotericin B
 - c. Ketoconazole
 - d. Itraconazole
15. Which is the main mechanism of cyclosporine's immunosuppressant effects?
 - a. Inhibition of phospholipase A2
 - b. Inhibiting calcineurin
 - c. IL2 antagonism
 - d. mTOR inhibition
16. How much elemental iron is contained in 200 mg tablet of ferrous sulphate?
 - a. 80 mg
 - b. 100 mg
 - c. 60 mg
 - d. 160 mg

PHARMACOLOGY PAPER- FIRST

Note: Attempt all questions.

Draw suitable diagrams (wherever necessary)

Q. 2. Give reasons why:

(1 x 4 = 04)

- a. Glycopyrrolate is preferred over atropine for preanaesthetic medication
- b. Sodium bicarbonate is used in salicylate poisoning
- c. Naproxen is preferred over ibuprofen in acute gout
- d. Propranolol used for prophylaxis of migraine but not for treatment

Q. 3. Problem based question:

(1 x 4 = 04)

A 65 year old man Suresh Singh came to the OPD with complaints of rigidity, pin rolling tremors and gradual dementia. He was started on some drugs. After four years of therapy he started experiencing rigidity and dyskinesia.

- a. What was the initial treatment started in this patient?
- b. What are the problems with prolonged therapy?
- c. How should these problems be managed?
- d. Mention two drugs that can cause extrapyramidal side effects. How will you manage them?

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Half life
- b. Non opioid antitussive
- c. Second gas effect
- d. Adverse effects of tricyclic antidepressants

Q. 5. (i) a. Classify anticholinergic drugs on the basis of their therapeutic uses.

(2+2 = 04)

b. Discuss the role of ipratropium bromide in COPD.

(ii) a. Illustrate with a diagram, sites of action of antiepileptic drugs.

(2+2 = 04)

b. Write therapeutic uses and adverse effects of Sodium valproate.

Q. 6. Write in brief about:

(2 x 4 = 08)

- a. Management of transient insomnia
- b. Pantoprazole
- c. Alpha blockers in BHP
- d. Drug synergism with examples

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, JUNE - 2017
PHARMACOLOGY
PAPER - FIRST

[Time allotted: Three hours]

[Max Marks: 40]

Q. 1. Multiple Choice questions (attempt all MCQs in the allotted first 15 minutes in the OMR sheet) (½ x 16= 08)

SET - B

1. Drugs used for rare disease are known as:
 - a. Orphan drug
 - b. Rare drug
 - c. Me too drug
 - d. Over the counter drug
2. Dosage interval depends upon:
 - a. Hepatic clearance
 - b. Volume of distribution
 - c. Elimination half-life
 - d. Plasma protein binding
3. Which of the following classes of drugs produce surmountable antagonism?
 - a. Reversible competitive antagonists
 - b. Irreversible competitive antagonists
 - c. Irreversible non-competitive antagonists
 - d. Physiological antagonists
4. Which of the following opioid analgesic is used as transdermal patch for chronic cancer pain?
 - a. Fentanyl
 - b. Morphine
 - c. Pentazocine
 - d. Tramadol
5. Opioid receptors are :
 - a. Receptor with enzyme activity
 - b. Nuclear receptor
 - c. GPCR
 - d. Chloride channels
6. All of the following act as agonist at GABA-A receptor except:
 - a. Bicuculline
 - b. Diazepam
 - c. Muscimol
 - d. Barbiturates
7. Following is the shortest acting benzodiazepine:
 - a. Temazepam
 - b. Alprazolam
 - c. Triazolam
 - d. Flurazepam
8. If a drug with a 2-hour half-life is given with an initial dose of 8 mcg/ml, assuming first-order kinetics, how much drug will be left at 6 hours?
 - a. 2 mcg/ml
 - b. 8 mcg/ml
 - c. 4 mcg/ml
 - d. 1 mcg/ml
9. Ritodrine is used in treatment of:
 - a. Hypertension
 - b. Parkinson's disease
 - c. Bronchial asthma
 - d. Premature labor
10. Sumatriptan used for acute migraine acts by:
 - a. Antagonist at H1 receptors
 - b. Selective antagonist at 5-HT receptors
 - c. Antagonist at β_1 and β_2 receptors
 - d. Selective agonist at 5-HT receptors
11. Which of the following is used for portal systemic encephalopathy?
 - a. Lorazepam
 - b. Lactulose
 - c. Loperamide
 - d. Loxapine
12. All of the following drugs are inhaled glucocorticoids except:
 - a. Prednisolone
 - b. Ciclesonide
 - c. Beclomethasone
 - d. Fluticasone
13. A rapid reduction in effect after administration of one or two dose is known as:
 - a. Hyposensitivity
 - b. Tolerance
 - c. Tachyphylaxis
 - d. Anaphylaxis
14. Omalizumab is administered in bronchial asthma by which route?
 - a. Subcutaneous
 - b. Oral
 - c. Intravenous
 - d. Inhalational
15. Which sulfa drug is used in inflammatory bowel disease?
 - a. Sulfapyrazone
 - b. Sulfasalazine
 - c. Sulfamethoxazole
 - d. Sulphadoxine
16. Which of the following is the most specific drug for the treatment of peptic ulcer caused by NSAIDs?
 - a. Ranitidine
 - b. Pirenzepine
 - c. Misoprostol
 - d. Omeprazole

PHARMACOLOGY PAPER- SECOND

Note: Attempt all questions.

Draw suitable diagrams (wherever necessary)

Q. 2. Give reasons why:

(1 x 4 = 04)

- a. ACEIs are preferred anti-hypertensives in diabetic patients
- b. Thiazide diuretics should be avoided in patients allergic to sulphonamides
- c. Alendronate is advised to be taken with plenty of water
- d. Centchroman is preferred over combined oral contraceptive pills

Q. 3. Problem based question:

(1 x 4 = 04)

A 30 year old male complains of pain and burning micturition and is being treated for UTI (urinary tract infection). After the treatment was initiated, he complained of pain in heel and was diagnosed to have Achilles tendonitis.

- a. What is the most likely drug used for the treatment of this patient? What is the mechanism of action of this drug?
- b. Name the drugs used for the treatment of UTI. What general advices will you give to the patient?
- c. What is the spectrum of this class of drugs?
- d. Enumerate urinary antiseptics and urinary analgesics.

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Superinfections
- b. Single daily dosing of aminoglycosides
- c. Ketoconazole
- d. IInd generation sulphonylureas

Q. 5. (i) Structured question:

(1+1+1+1=04)

- a. Classify beta-lactam antimicrobials
- b. Write mechanism of action & antibacterial spectrum of beta-lactams
- c. Comment upon the clinical status of extended spectrum penicillins
- d. Enumerate differences between ampicillin & amoxicillin.

(ii) Structured question:

(1+1+1+1=04)

- a. Classify anti-anginal drugs.
- b. Discuss the mechanism of nitrates in terminating acute attack of angina.
- c. What is the major limitation with continuous use of nitrates and how can it be overcome?
- d. Enumerate other therapeutic uses of nitrates.

Q. 6. Write in brief about:

(2 x 4 = 08)

- a. IIIrd generation cephalosporins
- b. LMWHs
- c. Tacrolimus in organ transplant
- d. Propranolol in thyroid storm

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, JUNE - 2017**PHARMACOLOGY****PAPER - SECOND****[Time allotted: Three hours]****[Max Marks: 40]****Q. 1. Multiple choice questions (attempt all MCQs in the allotted first 15 minutes in the OMR sheet) (½ x 16= 08)****SET - B**

1. Which antibiotic is primarily bacteriostatic but becomes bactericidal at higher concentrations?
 - a. Ampicillin
 - b. Amikacin
 - c. Tetracycline
 - d. Chloramphenicol
2. The following antibiotic penetrates blood-CSF barrier the best:
 - a. Chloramphenicol
 - b. Erythromycin
 - c. Gentamicin
 - d. Tetracycline
3. The drug **NOT** included in 3 drug regimen for post exposure prophylaxis of HIV in high risk patients is:
 - a. Lamivudine
 - b. Indinavir
 - c. Stavudine
 - d. Zidovudine
4. All of the following drugs may precipitate diabetes **except**:
 - a. Tacrolimus
 - b. Thiazide diuretic
 - c. Glucocorticoids
 - d. Pramilitide
5. Which of the following antimalarial drug is known to cause neuropsychiatric adverse reaction?
 - a. Mefloquine
 - b. Artesunate
 - c. Artemesinin
 - d. Quinine
6. The tetracycline with highest phototoxicity is:
 - a. Oxytetracycline
 - b. Doxycycline
 - c. Demeclocycline
 - d. Minocycline
7. Which of the following antitubercular drug is safe in hepatitis?
 - a. Ethambutol
 - b. INH
 - c. Rifampicin
 - d. Pyrazinamide
8. The following regimen is preferred for non-surgical termination of pregnancy in the first 7 weeks:
 - a. Oral mifepristone followed by oral misoprostol
 - b. Intravenous oxytocin infusion
 - c. Intramuscular carboprost
 - d. Intravaginal mifepristone followed by intra-amniotic dinoprost
9. A patient has an episode of hematemesis following streptokinase infused for the treatment of deep vein thrombosis. Which of the following drugs would be most effective in controlling bleeding episode?
 - a. Rutin
 - b. Vitamin K
 - c. Noradrenaline
 - d. Epsilon amino caproic acid
10. Which is true regarding ticlopidine?
 - a. It does not prolong bleeding time
 - b. It blocks Gp IIb/IIIa receptors on platelet membrane
 - c. It prevents ADP mediated platelet adenylyl cyclase inhibition
 - d. It inhibits thromboxane A2 synthesis in platelets
11. Estrogen therapy in postmenopausal women has been implicated in increasing the risk of the following disorders **except**:
 - a. Breast cancer
 - b. Gall stones
 - c. Osteoporosis
 - d. Endometrial carcinoma
12. Which of the following drugs has covalent interaction with its target?
 - a. Bosentan
 - b. Aspirin
 - c. Penicillin
 - d. Nitric oxide
13. The antihypertensive agent that should be avoided in young females and is used topically to treat alopecia areata is:
 - a. Indapamide
 - b. Hydralazine
 - c. Minoxidil
 - d. Prazosin
14. Which hypolipidemic drug can exacerbate the symptoms of gout?
 - a. Simvastatin
 - b. Ezetimibe
 - c. Gemfibrozil
 - d. Niacin
15. Which of the following is a cardiotoxic drug?
 - a. Mercaptopurine
 - b. Daunorubicin
 - c. Bleomycin
 - d. Amikacin
16. Antidiabetic drug that can be used safely in renal failure is:
 - a. Repaglinide
 - b. Metformin
 - c. Glimepiride
 - d. Rosiglitazone

PHARMACOLOGY PAPER- FIRST

Note: Attempt all questions.

Draw suitable diagrams (wherever necessary)

Q. 2. Give reasons why:

(1 x 4 = 04)

- a. SSRIs are preferred over TCA in depression
- b. Oximes are used in organophosphate poisoning
- c. Inhaled corticosteroids are used in bronchial asthma
- d. Dopamine is used in shock

Q. 3. Problem based question:

(1 x 4 = 04)

Ram Singh, 65 years of age, diagnosed case of Parkinsonism, complained of difficulty in walking, slowing of movement of limbs and inability to cope with his routine work. His complaint ameliorated on treatment with L-dopa, but also having nausea and vomiting. On suggestion of friend he started taking vitamin supplements. His earlier symptoms started reappearing.

- a. What is the cause of recurrence of symptoms? What measure could have been taken to rectify this problem?
- b. What drugs can be used for treatment of nausea and vomiting?
- c. Name other drugs which can be used to treat Parkinsonism.
- d. Why does on and off phenomenon occur. How will you treat it?

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Pre-anaesthetic medication
- b. Alfa blockers in Benign Prostatic Hypertrophy
- c. Pharmacovigilance
- d. Second gas effect

Q. 5. (i) Classify anti-epileptics. Discuss the mechanism of action, therapeutic uses & adverse effects of sodium valproate.

(1+3 = 04)

(ii) Classify beta-blockers & explain the therapeutic uses & adverse effects of propranolol.

(1+3 = 04)

Q. 6. Write in brief about:

(2 x 4 = 08)

- a. Proton pump inhibitors
- b. Ketamine
- c. Sublingual route of drug administration
- d. Ondansetron

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, JANUARY/ FEBRUARY- 2018
PHARMACOLOGY
PAPER - FIRST

[Max Marks: 40]

[Time allotted: Three hours]

Q. 1. Multiple Choice questions (attempt all MCQs in the allotted first 15 minutes in the OMR sheet) (½ x 16= 08)

SET - D

1. Which of the following drugs is used for the prophylaxis of migraine but **not** for angina pectoris?
 - a. Verapamil
 - b. Diltiazem
 - c. Flunarizine
 - d. Amlodipine
2. Most specific drug for the treatment of peptic ulcer caused due to chronic use of NSAIDs is:
 - a. Sucralfate
 - b. Pirenzepine
 - c. Omeprazole
 - d. Ranitidine
3. Allopurinol is most likely to potentiate the pharmacological action of:
 - a. 5-Fluorouracil
 - b. Bleomycin
 - c. 6-Mercaptopurine
 - d. Doxorubicin
4. Alkalinisation of urine hastens the excretion of:
 - a. Weakly basic drugs
 - b. Weakly acidic drugs
 - c. Strong electrolytes
 - d. Non-polar drugs
5. Transdermal drug delivery systems offer the following advantages **except**:
 - a. Produce high peak plasma concentration of the drug
 - b. Produce smooth and non-fluctuating plasma concentration of the drug
 - c. Minimise interindividual variation in the achieved plasma drug concentration
 - d. Undergo very little first pass metabolism of the drug
6. Dobutamine acts on :
 - a. D-1
 - b. D-2
 - c. Beta-1
 - d. Beta-2
7. Rate limiting step in catecholamine synthesis is:
 - a. Phenylalanine hydroxylase
 - b. Tyrosine hydroxylase
 - c. Dopa-decarboxylase
 - d. Dopamine hydroxylase
8. Sildenafil is a:
 - a. Beta blocker
 - b. PDE-5 Inhibitor
 - c. Alfa blocker
 - d. PDE-6 Inhibitor
9. Which is true for Sumatriptan?
 - a. 5-HT_{1D/1B} receptor antagonist
 - b. Dilates cranial blood vessels
 - c. Suppress neurogenic inflammation
 - d. Causes nausea
10. A 51-year old woman with symptoms of major depression also has narrow angle glaucoma. Which antidepressant should be avoided?
 - a. Amitriptyline
 - b. Sertraline
 - c. Bupropion
 - d. Mirtazepine
11. Opioid receptors are:
 - a. Nuclear receptors
 - b. G-protein coupled receptors
 - c. Receptors with enzyme activity
 - d. Chloride channels
12. Peripheral adverse effects of levodopa, including nausea, hypotension, and cardiac arrhythmias, can be diminished by including which of the following drugs in the therapy?
 - a. Ropinirole
 - b. Bromocriptine
 - c. Carbidopa
 - d. Entacapone
13. A 35-year old man presents with symptoms of repeated hand washing. He realizes that his behaviour is interfering in his daily activities. Which drug would you prefer?
 - a. Imipramine
 - b. Fluvoxamine
 - c. Lithium
 - d. Tranylcypromine
14. Lithium interferes with the synthesis of:
 - a. Inositol
 - b. Glutamate
 - c. Arginine
 - d. Proline
15. Anti-psychotic with maximum anticholinergic side effects:
 - a. Olanzapine
 - b. Fluoxetine
 - c. Thioridazine
 - d. Haloperidol
16. Torsades de pointes has been reported with use of which of these.
 - a. Levocetirizine
 - b. Fexofenadine
 - c. Astemizole
 - d. Loratidine

PHARMACOLOGY PAPER- SECOND

Note: Attempt all questions.
Draw suitable diagrams (wherever necessary)

Q. 2. Give reasons why:

(1 x 4 = 04)

- a. Biguanides are used in obese diabetics patients.
- b. Primaquine should be avoided in G6PD deficiency.
- c. Sildenafil is cautiously used in patients with concurrent cardiac disease.
- d. LMWH is preferred over unfractionated heparin for anticoagulant therapy.

Q. 3. Problem based question:

(1 x 4 = 04)

A 30 year old male complains of pain and burning micturition and is being treated for UTI (urinary tract infection). After the treatment was initiated, he complained of pain in heel and was diagnosed to have Achilles tendonitis.

- a. What is the most likely drug used for the treatment of this patient? What is the mechanism of action of this drug?
- b. Name the drugs used for the treatment of UTI. What general advices will you give to the patient?
- c. What is the spectrum of this class of drugs?
- d. Enumerate urinary antiseptics and urinary analgesics.

Q. 4. Write short notes on:

(2 x 4 = 08)

- a. Tocolytics
- b. Secnidazole
- c. Fluconazole
- d. Vinca Alkaloids

Q. 5. (i) Classify anti-hypertensive drugs. Write the mechanism of action and adverse effect of ACE Inhibitors.

(2+1+1 = 04)

(ii) Classify quinolones antibiotics. Describe mechanism of action, adverse effects of Ciprofloxacin.

(2+1+1 = 04)

Q. 6. Write in brief about:

(2 x 4 = 08)

- a. Antiplatelet drugs.
- b. SERMs
- c. Warfarin
- d. Atorvastatin

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, JANUARY/ FEBRUARY- 2018
PHARMACOLOGY
PAPER - SECOND

[Max Marks: 40]

[Time allotted: Three hours]

Q. 1. Multiple Choice questions (attempt all MCQs in the allotted first 15 minutes in the OMR sheet) ($\frac{1}{2} \times 16 = 08$)

SET - B

1. Longest acting insulin is:
 - a. Global zinc suspension
 - b. Insulin-zinc suspension
 - c. Neutral protamine-zinc insulin
 - d. Protamine-zinc insulin
2. A patient suffering from AIDS is on zidovudine, lamivudine and indinavir therapy. He develops pulmonary tuberculosis for which treatment is started. Which of the following should be avoided in him?
 - a. INH
 - b. Pyrazinamide
 - c. Ethambutol
 - d. Rifampicin
3. Which antibiotic acts by inhibiting protein synthesis?
 - a. Cefotetan
 - b. Oxacillin
 - c. Doxycycline
 - d. Ciprofloxacin
4. The antibiotic known to cause "Red Man" syndrome is:
 - a. Clindamycin
 - b. Cefadroxil
 - c. Vancomycin
 - d. Azithromycin
5. Drug of choice for treatment of malaria due to *Plasmodium vivax* in a 25 year old pregnant female is:
 - a. Chloroquine
 - b. Primaquine
 - c. Sulfadoxine-pyrimethamine
 - d. Quinine
6. Angiotensin converting enzyme inhibitors are useful in congestive heart failure as:
 - a. First choice drugs unless contraindicated
 - b. An alternative to diuretics
 - c. A substitute for digitalis
 - d. Adjuncts only in resistant cases
7. Propranolol is contra-indicated in a patient of angina pectoris who is already receiving:
 - a. Nifedipine
 - b. Aspirin
 - c. Verapamil
 - d. Isosorbide mono-nitrate
8. Treatment of choice in hypertension with diabetes mellitus is:
 - a. β -blockers
 - b. Thiazides
 - c. ACE inhibitors
 - d. Calcium channel blockers
9. A drug that binds to and inhibits Gp IIb/IIIa glycoprotein and is responsible for platelet anti aggregatory effects:
 - a. Clopidogrel
 - b. Enoxaparin
 - c. Fondaparinux
 - d. Tirofiban
10. A patient has iron deficiency anaemia. The agent that can be used to improve the absorption of iron is:
 - a. Antacid
 - b. Tetracycline
 - c. Ascorbic acid
 - d. Phosphates
11. Which is an orally acting ovulation inducing drug?
 - a. Clomiphene
 - b. Danazol
 - c. Mifepristone
 - d. Menotropin
12. An old woman is required to receive 4 cycles of cancer chemotherapy. After her first cycle of chemotherapy, she developed chemotherapy induced thrombocytopenia. Then in the next cycle, it would be appropriate to give this patient:
 - a. Darbopoietin alpha
 - b. Filgrastim (G-CSF)
 - c. Iron dextran
 - d. Oprelvekin (IL-1)
13. Which of the following drugs is effective against pseudomonas infection?
 - a. Ampicillin
 - b. Ceftriaxone
 - c. Colistin
 - d. Cefixime
14. Finasteride acts by blocking:
 - a. α -receptors
 - b. 5- α reductase enzyme
 - c. Androgen receptors
 - d. β -receptors
15. Receptor for which of the following is present intra-cellularly?
 - a. Insulin
 - b. Corticosteroid
 - c. Epinephrine
 - d. Glucagon
16. Which of the following drugs promotes the release endogenous insulin?
 - a. Acarbose
 - b. Glipizide
 - c. Metformin
 - d. Pioglitazone