

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, DECEMBER-2022

PHARMACOLOGY
PAPER - SECOND

[Time allotted: Three hours]

SET - A

[Max Marks: 100]

Q. 1. Multiple choice questions (Darken the single best response in OMR sheet. Time allotted-20 minutes) (20 x 1 = 20)

1. Drug of choice of meningococcal meningitis:
 - a. Penicillin
 - b. Erythromycin
 - c. Septran
 - d. Rifampicin
2. Following is **not** the adverse effect of Nitroglycerin:
 - a. Headache
 - b. Flushing
 - c. Postural Hypotension
 - d. Bradycardia
3. Drug effective in treatment of neurocysticercosis:
 - a. Niclosamide
 - b. Albendazole
 - c. Mebendazole
 - d. Pyrantel pamoate
4. This drug is a class IA antiarrhythmic drug:
 - a. Sotalol
 - b. Propranolol
 - c. Verapamil
 - d. Quinidine
5. Which of the following drug requires dose adjustment in renal failure?
 - a. Cefoperazone
 - b. Doxycycline
 - c. Streptomycin
 - d. Rifampicin
6. All of the following are Indications of bromocriptine **except**:
 - a. Prolactin-secreting adenomas
 - b. Amenorrhoea-Galactorrhea
 - c. Prolactin deficiency
 - d. Acromegaly
7. Which of the following is **not** a α -Glucosidase inhibitor?
 - a. Acarbose
 - b. Miglitol
 - c. Voglibose
 - d. Pioglitazone
8. Which diuretic could be considered appropriate for combining with ACE inhibitors?
 - a. Spironolactone
 - b. Eplerenone
 - c. Hydrochlorothiazide
 - d. Scopolamine
9. Mechanism of sulfonamides antibacterial effect is:
 - a. Inhibition of dihydropteroatereductase
 - b. Inhibition of bacterial folate synthase
 - c. Inhibition of cyclooxygenase
 - d. Activation of DNA gyrase
10. Beri Beri is treated by:
 - a. Ribofavin
 - b. Thiamine
 - c. Pyridoxine
 - d. Niacin
11. All are antiplatelet drugs **except**:
 - a. Aspirin
 - b. Clopidogrel
 - c. Dipyridamole
 - d. Warfarin
12. All of the following drugs may precipitate diabetes **except**:
 - a. Thiazide Diuretics
 - b. Glucocorticoids
 - c. Pramilitide
 - d. Tacrolimus
13. All of the following agents inhibit bacterial protein synthesis **except**:
 - a. Linezolid
 - b. Clindamycin
 - c. Muprocin
 - d. Teicoplanin
14. High ceiling diuretics are useful in the treatment of all of the following **except**:
 - a. Generalised edema
 - b. Cerebral Edema
 - c. Acute pulmonary edema
 - d. pulmonary hypertension
15. Which of the following decrease renin secretion?
 - a. ACEI
 - b. Beta Blocker
 - c. Loop diuretics
 - d. ARBs
16. Hemolytic anemia may be a side effect of:
 - a. Propranolol
 - b. Reserpine
 - c. Methyl dopa
 - d. Clonidine
17. Antiviral drug of choice for swine Flu is:
 - a. Acyclovir
 - b. Foscarnet
 - c. Fanciclovir
 - d. Oseltamivir
18. Which of the following is **not** urinary antiseptic?
 - a. Nitrofurantoin
 - b. Methenamine
 - c. Fusidic acid
 - d. Nalidixic acid
19. In a chronic alcoholic patient which of the following can be administered:
 - a. Cefamandole
 - b. Metronidazole
 - c. Chlorpropamide
 - d. Beclomethasone
20. Nevirapine is:
 - a. Non-nucleoside reverse transcriptase inhibitor
 - b. Nucleoside reverse transcriptase inhibitor
 - c. Protease inhibitor
 - d. Fusion inhibitor

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

- Q. 2. Give reasons why:** **(5 x 2 = 10)**
- a. Bisphosphonates are used in Osteoporosis
 - b. Dabigatran is preferred over Warfarin for long term Anticoagulation
 - c. Fluoroquinolones antimicrobial drugs are contraindicated in children.
 - d. Centchroman is preferred over combined oral contraceptive pills.
 - e. Clomiphene used in infertility
- Q. 3. Problem based question:** **(2+3+3+2 = 10)**
- A twenty eight year old female who has recently returned from Indonesia has developed periodic high grade fever associated with chills and rigor. Clinical and laboratory findings include hepato splenomegaly and presence of malarial parasite in blood smear.
- a. What drug treatment should be prescribed to her?
 - b. What prophylactic regimen she should have taken before travelling for her complete protection against malaria?
 - c. What will you prescribe her if she is a case of Chloroquine resistant falciparum malaria?
 - d. How will you manage this case if the female was pregnant
- Q. 4. Write briefly on:** **(4 x 6 = 24)**
- a. Potassium sparing diuretics
 - b. Drug therapy of anaerobic bacterial infections
 - c. GLP-1 analogs
 - d. Therapeutic Empathy: How it impacts patient care
- Q. 5. (i)** **(4 x 2.5 = 10)**
- a. Classify the drugs used in Congestive heart failure
 - b. Describe the use of ACE inhibitors in CHF
 - c. Describe the role of β blockers in CHF
 - d. Write the rationale and mechanism of action of spironolactone in CHF
- (ii)** **(4 x 2.5 = 10)**
- a. Classify Aminoglycoside antibiotics & describe their major pharmacokinetic parameters
 - b. Therapeutic uses and toxicity of Aminoglycosides
 - c. Mechanism of development of resistance of Aminoglycosides
 - d. Write the rationale of combination of Aminoglycosides with β lactam antibiotics in subacute bacterial endocarditis.
- Q. 6. Answer as indicated:** **(4 x 4 = 16)**
- a. Compare and contrast Tamoxifen vs Letrozole in tabulated form.
 - b. Enlist drugs for mucormycosis. Illustrate with a diagram mechanism of action of these drugs. Also mention toxicity of each drug.
 - c. Write Antitubercular regimen for previously treated Tuberculosis case in a tabular form. Write the rationale of using Pyrazinamide in the same.
 - d. Illustrate on a flow chart mechanism of action of Folate Antagonists.

[Time allotted: Three hours]

SET – A

[Max Marks: 100]

Q. 1. Multiple choice questions (Darken the single best response in OMR sheet. Time allotted 20 minutes) (20 x 1 = 20)

1. Which of the following blocks ADP receptors?
 - a. Aspirin
 - b. Clopidogrel
 - c. Tirofiban
 - d. Dipyridamole
2. Dryness of mouth occurring as an adverse effect of antipsychotic drugs is due to blockade of:
 - a. Muscarinic receptors
 - b. GABA receptors
 - c. Serotonergic receptors
 - d. Dopaminergic receptors
3. Which of the following class of drugs is likely to precipitate an acute attack of asthma?
 - a. Beta-adrenergic agonists
 - b. NSAIDs
 - c. Dopaminergic drugs
 - d. H1 receptor blockers
4. Alpha blockers can be used in BPH:
 - a. To decrease size of prostate
 - b. To relieve symptoms
 - c. To balance muscarinic over activity
 - d. To convert testosterone to Dihydrotestosterone
5. True about Metoclopramide:
 - a. Dopamine -1 receptor Antagonist
 - b. Stimulates CTZ
 - c. Prokinetic with additional 5HT4 antagonism
 - d. A strong cannabinoid
6. GnRH analogue used in hormonal treatment of Carcinoma Prostate:
 - a. Goserelin
 - b. Bicalutamide
 - c. Cyproterone
 - d. Finasteride
7. Vitamin B₁₂ along with Iron therapy, is best indicated in which of these?
 - a. Megaloblastic Anemia
 - b. Anemia due to parasitic infections
 - c. Early Childhood Anemias
 - d. Anemia accompanying Renal failure
8. Patent ductus arteriosus can be closed using which of these?
 - a. Ibuprofen
 - b. Monteleukast
 - c. Propranolol
 - d. Diclofenac Sodium
9. Percentage of levodopa that enters the brain unaltered:
 - a. 1-3%
 - b. 20-30%
 - c. 30-70%
 - d. >70%
10. Most conventional anti-psychotic block this receptor:
 - a. D1
 - b. D2
 - c. D3
 - d. D4
11. Morphine cause all **except**:
 - a. Analgesia
 - b. Sedation
 - c. Diarrhoea
 - d. Increased Prolactin Secretion
12. The opiate associated with seizures when given in high doses to patients with renal failure:
 - a. Morphine
 - b. Pethidine
 - c. Methadone
 - d. Fentanyl
13. Which of the following is a tyrosine kinase linked receptor?
 - a. Insulin
 - b. Acetyl choline
 - c. Estrogen
 - d. Thyroxine
14. Which of the following terms is used to describe ability of a drug to cause fetal abnormalities?
 - a. Iatrogenic
 - b. Teratogenic
 - c. Tachyphylaxis
 - d. Cytotoxic
15. Which of the following is a clinical use for a muscarinic agonist?
 - a. Treatment of Myasthenia Gravis
 - b. Anticholinesterase poisoning
 - c. Acute attack of bronchial asthma
 - d. Tocolytic
16. What is the predominant adrenoceptor in heart muscle?
 - a. $\alpha 1$ adrenoceptor
 - b. $\alpha 2$ adrenoceptor
 - c. $\beta 1$ -adrenoceptor
 - d. $\beta 2$ -adrenoceptor
17. The most appropriate route of administration for adrenaline in anaphylactic shock is:
 - a. Intracardiac
 - b. Intravenous
 - c. Intramuscular
 - d. Subcutaneous
18. True about Dobutamine:
 - a. Acts on Dopamine receptors
 - b. Agonist at Beta -1 receptors
 - c. Dilates renal and splanchnic blood vessels
 - d. Increases oxygen requirement of heart
19. Which of the following statements is the closest description of Phase II metabolism?
 - a. Adding polar molecule to a functional group
 - b. Making polar compounds non polar
 - c. Conjugation reactions
 - d. Utilization of cytochromal enzymes
20. Which of the following terms is used to describe a drug that binds to a receptor, fails to activate it?
 - a. Agonist
 - b. Antagonist
 - c. Partial agonist
 - d. Inverse agonist

PHARMACOLOGY
PAPER- FIRST

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

- Q. 2. Give reasons why:** **(5 x 2 = 10)**
- a. Zolpidem is best for sleep induction
 - b. Beta blockers decrease mortality in patients of Myocardial Infarction.
 - c. Multi drug treatment regime is effective for Hpylori infections
 - d. Inhaled corticosteroids are the drugs of choice for Chronic Bronchial Asthma
 - e. Thiopentone is used as an inducing agent
- Q. 3. Problem based question:** **(1+3+2+2+2 = 10)**
- A 30 year old man comes to the emergency in a semi-conscious state and saliva drooling from corner of the mouth. He has pin point pupils. His attendants tell that he has consumed an insecticide, Baygon.
- a. What is the probable class of drug that has caused poisoning?
 - b. What is the specific antidote for this poisoning? Write its dose and route of administration.
 - c. Explain the other therapeutic uses of the Antidote used.
 - d. Enumerate Adverse Drug Reactions and Contraindications of the Antidote used.
 - e. What is the role of Oximes in this poisoning?
- Q. 4. Write briefly on:** **(4 x 6 = 24)**
- a. Prophylaxis for Migraine
 - b. Phenytoin
 - c. 5HT3 antagonists
 - d. Health care as a right
- Q. 5. (i) Classify beta blockers. Name the adrenergic receptors and explain the site of location of these receptors. Differentiate between selective and non-selective Beta blockers. Explain therapeutic uses of Beta blockers with rationale.** **(2+3+2+3= 10)**
- (ii) Classify anxiolytics and enumerate their uses. Explain the mechanism of action of anxiolytics. How antidepressants drugs differ from anxiolytics?** **(3+2+2+3= 10)**
- Q. 6. Answer as indicated (Draw a labeled diagram/flow chart to explain):** **(4 x 4 = 16)**
- a. Mechanism of action of NSAIDs
 - b. Site of action of various drugs used for treatment of glaucoma
 - c. Difference between competitive and non-competitive inhibition - Tabular format
 - d. Mechanism of action of Uricosuric drugs.