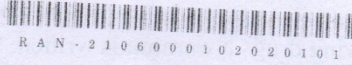


Library



RAN-2106000102020101

RAN-2106000102020101



II<sup>nd</sup> M.B.B.S. Examination January - 2023

Department of Pharmacology, (Paper -I)

Time: 3 Hours ]

[ Total Marks: 100

સૂચના : / Instructions

(1) નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવાકી પર અવશ્ય લખવી.  
Fill up strictly the details of signs on your answer book

Name of the Examination:  
II<sup>nd</sup> M.B.B.S.

Name of the Subject :  
Department of Pharmacology, (Paper -I)

Subject Code No.: 2106000102020101

Seat No.:

Student's Signature

- (2) Encircle the single most appropriate answer.
- (3) Each question carries one mark and there is no negative marking.
- (4) Overwriting is not allowed.

Q. 1 Multiple Choice Questions (MCQs)

[Marks 20]

1. All of the following statements for COX-2 are correct EXCEPT :
  - a. Induced at the site of inflammation
  - b. Activation of COX-2 leads to ulcer protective effect on gastric mucosa
  - c. It is constitutionally expressed on some cell surfaces
  - d. It is utilized in generation of eicosanoids with a ring structure
2. Which of the following drug is commonly used in narcoanalysis?
  - a. Atropine sulfate
  - b. Scopolamine hydrochloride
  - c. Phenobarbitone
  - d. Morphine

RAN-2106000102020101 ]

[ 1 ]

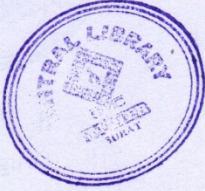
[ P.T.O. ]

P2003



3. For which of the following drugs a warning is written: 'To be sold by retail on the prescription of registered medical practitioner only'.
- Schedule C
  - Schedule X
  - Schedule Y
  - Schedule H
4. Antihistaminics used for motion sickness is :
- Cetirizine
  - Meclizine
  - Diphenhydramine
  - Fexofenadine
5. The sympathetic and parasympathetic systems exert functionally opposite influences on the following parameters except:
- Heart rate
  - Atrial refractory period
  - Pupil diameter
  - Intestinal motility
6. Gastric lavage is contraindicated in :
- Salicylate poisoning
  - Organophosphate poisoning
  - Kerosene poisoning
  - Morphine poisoning
7. Regarding efficacy and potency of a drug all are true EXCEPT :
- In a clinical setup, efficacy is more important than potency
  - In the log dose response curve, the height of the curve corresponds with efficacy
  - ED<sub>50</sub> of the drug corresponds to the efficacy
  - Drugs that produce similar pharmacological effect can have different levels of efficacy
8. Tachyphylaxis is seen after use of:
- Tamoxifen
  - Ephedrine
  - Morphine
  - Chlorpromazine
9. Correctly matched pair of heavy metal and its respective chelating agent is :
- Iron - BAL
  - Mercury - Calcium disodium edetate
  - Copper - d-penicillamine
  - Arsenic - Desferioxamine



- 
10. Caution is advised for the use of Aspirin in which of the following group of patients :
- In diabetics - can cause hyperglycaemia
  - In children with viral disease - risk of acute renal failure
  - In gout - can increase serum uric acid levels
  - In pregnancy - risk of teratogenicity
11. Timolol eye drops are preferred over pilocarpine eye drops by glaucoma patients because :
- Timolol is more effective than pilocarpine
  - Timolol acts by enhancing uveo-scleral outflow
  - Timolol produces less ocular side effects
  - There are no contraindications to timolol
12. Use of morphine in preanaesthetic medication:
- Is routine except in the presence of contraindications
  - Is restricted to patients being anaesthetised with ether
  - Should be made only in combination with atropine
  - Is restricted mostly to patients in pain preoperatively
13. A drug competes with ACh for receptors at the motor end plate affect skeletal muscle as it
- produces uncontrolled muscle spasms
  - causes the muscles to contract and be unable to relax
  - causes muscles to relax and be unable to contract
  - makes the muscles more excitable
14. Transdermal drug delivery systems offer the following advantages EXCEPT :
- Produces high peak plasma concentration of the drug
  - Produces smooth and non-fluctuating plasma concentration of the drug
  - Minimises inter-individual variations in the achieved plasma drug concentration
  - Avoids hepatic first-pass metabolism of the drug
15. Therapeutic index is an assessment of:
- Potency of drug
  - Onset of action
  - Duration of action
  - Margin of safety
16. All of the following statements for flumazenil are true EXCEPT:
- It is a specific antagonist of benzodiazepines
  - It may be used to treat barbiturate poisoning
  - It is given intravenously
  - It acts on same site on GABA channels where benzodiazepines bind



17. When is Ketamine NOT preferred as an anaesthetic agent ?
- Glaucoma
  - Emergency conditions with full stomach
  - Short surgeries in asthmatic patients
  - For dissociative anaesthesia
18. Drug of choice for alcohol withdrawal is :
- Chlordiazepoxide
  - Disulfiram
  - Naltrexone
  - Diazepam
19. The most vulnerable period of pregnancy for the causation of foetal malformations due to drugs is:
- 18-55 days of gestation
  - 56-84 days of gestation
  - Second trimester
  - 36 weeks onwards
20. In drug metabolism, hepatic cytochrome P-450 (CYP-450) system is responsible for :
- Phase I reactions
  - Phase II reactions
  - Both (a) and (b)
  - Converting hydrophilic metabolites to lipophilic metabolites

### SECTION I

#### **Instructions:**

- Answers should be precise and to the point.
- Give examples and figures if needed.
- First 20 mins have been allotted to solve multiple choice questions.

#### **Q. 2 Answer in brief [any five] :**

[3×5=15]

- First order versus zero order kinetics.
- Explain microsomal enzyme inhibition with suitable examples.
- Write differences between neostigmine and physostigmine.
- Short note on "Placebo".
- Write in brief therapeutic uses and adverse effects of selective COX-2 inhibitors.
- Define drug antagonism. Mention its types with suitable examples.





**Q. 3 Write short notes [any three] :**

[5×3=15]

- Enumerate various drugs for glaucoma. Discuss the pharmacotherapy for angle closure glaucoma.
- Classify  $\beta$  - blocker drugs. Discuss their therapeutic uses and adverse effect profile.
- Describe the concept of potency and efficacy of drugs with suitable examples and graphs.
- Mention various atropine substitutes and/or derivatives. Describe their clinical uses.

**Q. 4 Case based questions :**

[10×1=10]

A 36-year-old female presented to the rheumatology department with chief complaints of pain, swelling and morning stiffness of small joints of both hands along with increased fatigue in the last 3-4 months. Her physical examination and laboratory investigations were suggestive of rheumatoid arthritis. She was prescribed tablet methotrexate 15 mg once a week for two months and tablet aceclofenac 100 mg once a day for one month for her condition.

Answer the following questions :

- Explain the rationale behind prescribing the above-mentioned drugs for initial episode. What are the main adverse effects to be anticipated in this patient?  
Mention the precautions to be taken while the patient is on these medications. [2+1+2]
- Classify disease modifying anti-rheumatoid drugs. [2]
- What is the pharmacological basis of prescribing corticosteroids during the course of the disease? [3]

### SECTION II

**Q. 5 Answer in brief [any five] :**

[3×5=15]

- Explain in brief "Pharmacovigilance".
- Typical versus atypical antipsychotic agents.
- Short note of management of methanol poisoning.
- Enlist agents used in spinal anaesthesia along with complications of spinal anaesthesia.
- Name two mucolytic agents. Explain briefly role of mucolytic in the treatment of cough.
- Write a note on pre-anaesthetic medications along with its uses.



**Q. 6**

**Write short notes [any three] :**

**[5×3=15]**

- a. Mention various neuromuscular blocking agents. Explain the difference between non-depolarizing and depolarizing block. Write any two therapeutic uses of succinylcholine.
- b. Enumerate various anti-epileptic agents. Explain the pharmacological basis of phenytoin in grand mal epilepsy. Describe drug-drug interactions of phenytoin.
- c. Phases of clinical trial.
- d. Classify anti-asthmatic drugs. Discuss the treatment for acute attack of bronchial asthma.

**Q. 7**

**Case based questions :**

**[10×1=10]**

A 50-year-old male patient presents to the medicine out-patient department with tremors at rest in one hand, difficulty in initiating movements, mask like face, defective posture and gait along with dementia. After a thorough clinical and central nervous system examination, he was diagnosed as a case of parkinson's disease. The clinician prescribed a combination of levodopa 100 mg and carbidopa 10 mg orally once daily for one month. The patient was asked to visit for follow-up after a month.

Answer the following questions :

- a. Explain the rationale for prescribing a fixed dose combination of levodopa + carbidopa.  
Discuss the consequences of initial as well as prolonged levodopa therapy. [2 + 2]
- b. Classify the drugs prescribed for parkinsonism. [2]
- c. What is drug induced parkinsonism? How will you treat such a case? [2]
- d. Mention recent developments in the treatment of parkinsonism. [2]





RAN - 2106000102020102

**RAN-2106000102020102**

**IInd M.B.B.S. Examination January - 2023**

**Pharmacology - Paper II**



**Time: 3 Hours ]**

**[ Total Marks: 100**

**સૂચના : / Instructions**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:

**IInd M.B.B.S.**

Name of the Subject :

**Pharmacology - Paper II**

Subject Code No.: **2106000102020102**

Seat No.:

--	--	--	--	--	--

Student's Signature

- (2) Encircle the single most appropriate answer.
- (3) Each question carries one mark and there is no negative marking.
- (4) Overwriting is not allowed.

**Q.1 Multiple Choice Questions (MCQs)**

**[Marks 20]**

1. Select the drug combination which does NOT exhibit supra-additive synergism :
  - a. Nalidixic acid + nitrofurantoin
  - b. Amoxicillin + clavulanic acid
  - c. Pyrimethamine + sulfadoxine
  - d. Sulfamethoxazole + trimethoprim
2. Which of the following is NOT a valid indication for parenteral iron therapy ?
  - a. Inadequate response to oral iron due to patient non-compliance
  - b. Anemia during pregnancy
  - c. Severe anemia associated with chronic bleeding
  - d. Anemia in a patient of active rheumatoid arthritis
3. Which diuretic is preferred in cirrhotic ascites ?
  - a. Furosemide
  - b. Spironolactone
  - c. Acetazolamide
  - d. All of the above

RAN-2106000102020102 ]

[ 1 ]

[ P.T.O. ]

P2005



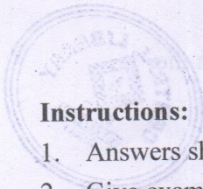






13. The multidrug therapy of leprosy is superior to monotherapy on the following basis :
- It prevents emergence of dapsone resistance
  - It is effective in cases with primary dapsone resistance
  - It shortens the total duration of drug therapy and improves compliance
  - All of the above
14. Dobutamine is preferred, over dopamine in cardiogenic shock because of its relatedness to :
- Better cardiac stimulation
  - Less peripheral vasoconstriction
  - Lower risk of cardiac arrhythmias
  - More CNS stimulation
15. Which antifungal agent is effective in both dermatophytosis as well as systemic mycosis :
- |                   |                 |
|-------------------|-----------------|
| a. Amphotericin B | b. Griseofulvin |
| c. Clotrimazole   | d. Ketoconazole |
16. On which enzymes do statins act ?
- |                        |                       |
|------------------------|-----------------------|
| a. Acyl CoA synthetase | b. Acyl CoA reductase |
| c. HMG CoA synthetase  | d. HMG CoA reductase  |
17. 'Red man syndrome' has been associated with rapid intravenous injection of the following antibiotic:
- |                 |                 |
|-----------------|-----------------|
| a. Vancomycin   | b. Clindamycin  |
| c. Cefoperazone | d. Piperacillin |
18. Astringents are substances that:
- Irritate sensory nerve endings
  - Precipitate proteins
  - Penetrate target cell nucleus for their action
  - All of the above
19. The following anticancer drug has high emetogenic potential:
- |                     |                 |
|---------------------|-----------------|
| a. Vincristine      | b. Chlorambucil |
| c. 6-Mercaptopurine | d. Cisplatin    |
20. Which vitamin acts as a hormone ?
- |              |              |
|--------------|--------------|
| a. Vitamin A | b. Vitamin D |
| c. Vitamin C | d. Vitamin E |





## SECTION - I

### Instructions:

1. Answers should be precise and to the point.
2. Give examples and figures if needed.
3. First 20 mins have been allotted to solve multiple choice questions.

**Q.2. Answer in brief [any five] :** [3×5 = 15]

- a. Discuss briefly about heparin versus warfarin.
- b. Classify thyroid inhibitors. Write a note on thyroid storm management.
- c. Management of erectile dysfunction.
- d. Outline the pharmacotherapy of psoriasis.
- e. Describe various types of oral contraceptives. What is the rationale of combining estrogen and progesterone for contraception?
- f. Write a note on drug therapy for constipation.

**Q.3. Write short notes [any three] :** [5×3 = 15]

- a. Mention various thrombolytic agents. Describe their uses, mechanism of action and precautions required while using them.
- b. Discuss various insulin preparations available. Write in detail about newer insulin preparations, their uses, pros and cons of each.
- c. Enumerate commonly used glucocorticoids. Discuss their adverse effect profile.
- d. Classify diuretic agents. Explain mechanism of action, uses and adverse effect profile of thiazide-like diuretics in detail.

**Q.4. Case based questions :** [10×1 = 10]

An adult 40 years male, an executive in a multi-national company, has complaints of pain in abdomen since a month, along with occasional heart burn due to which he is unable to sleep. It worsens with ingestion of spicy and oily meals. After a thorough examination, physician diagnosed him as a case of peptic ulcer. Along with appropriate diet and lifestyle modifications, physician prescribed him anti-ulcer drugs.

### Answer the following questions :

- a. Enumerate various drugs from different groups which can be prescribed to him along with mechanism of action of any two drug classes. [4]
- b. Which drugs should be prescribed to the above patient if he develops gastroesophageal reflux disease (GERD)? [2]
- c. Write briefly about treatment regimens for H. pylori infection. [4]



SECTION - II



**Q.5 Answer in brief [any five] :** [3×5 = 15]

- Elaborate mechanism of action, therapeutic uses and adverse effects of metronidazole.
- Outline the pharmacotherapy of urinary tract infection.
- What is post exposure prophylaxis for HIV infection? Write two NACO recommended regimens for same.
- Describe measures to prevent antimicrobial drug resistance in detail.
- Write a short note on anti-hypertensives in pregnancy.
- Enumerate HMG-CoA reductase inhibitors along with their uses.

**Q.6. Write short notes [any three] :** [5×3 = 15]

- Enlist anti-malarial drugs. Discuss the treatment regimens for chloroquine resistant *P. falciparum* malaria.
- Classify fluoroquinolones. Describe the mechanism of action, therapeutic uses and adverse effects of any one fluoroquinolone.
- Which are the drugs for congestive heart failure? Discuss the mechanism of action of digoxin in this scenario.
- Describe in detail general principles for cancer chemotherapy.

**Q.7. Case based questions :** [10×1 = 10]

A 55-year-old male patient was admitted to casualty with chief complaint of heaviness in chest, squeezing midsternal pain which was radiating to jaw and left shoulder without any precipitating factor, lasting for about few minutes. He was sweating profusely. His electrocardiogram showed ST segment elevation. He was diagnosed as having acute myocardial infarction.

**Answer the following questions :**

- Write in detail about the management of above-mentioned diagnosis. [5]
- Classify anti-anginal drugs. [3]
- What is the rationale of using  $\beta$  blocker + long-acting nitrate combination in classical angina? [2]





RAN - 2106000102020101

**RAN-2106000102020101**

**Phase II M.B.B.S. Examination March - 2023**

**Pharmacology Paper - I**

**Time: 3 Hours ]**

**[ Total Marks: 100**

**સૂચના : / Instructions**

(૧)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

Phase II M.B.B.S.

Name of the Subject :

Pharmacology Paper - I

Subject Code No.: 2106000102020101

Seat No.:

--	--	--	--	--	--

Student's Signature

- (2) Answers should be precise and to the point.
- (3) Give examples and figures if needed.
- (4) First 20 mins have been allotted to solve multiple choice questions.

**Section I**

**Instructions:**

- (1) Encircle the single most appropriate answer.
- (2) Each question carries one mark and there is no negative marking.
- (3) Overwriting is not allowed.

**Q. 1 Multiple Choice Questions (MCQs) (20)**

1. Therapeutic index is an assessment of:
  - a. Potency of drug
  - b. Onset of action
  - c. Duration of action
  - d. Margin of safety
2. All of the following statements for flumazenil are true EXCEPT :
  - a. It is a specific antagonist of benzodiazepines.
  - b. It may be used to treat barbiturate poisoning.
  - c. It is given intravenously.
  - d. It acts on same site on GABA channels where benzodiazepines bind.

RAN-2106000102020101 ]

[ 1 ]

[ P.T.O. ]

PI601



3. When is Ketamine NOT preferred as an anaesthetic agent ?
  - a. Glaucoma
  - b. Emergency conditions with full stomach
  - c. Short surgeries in asthmatic patients
  - d. For dissociative anaesthesia
4. Drug of choice for alcohol withdrawal is :
  - a. Chlordiazepoxide
  - b. Disulfiram
  - c. Naltrexone
  - d. Diazepam
5. The most vulnerable period of pregnancy for the causation of foetal malformations due to drugs is :
  - a. 18-55 days of gestation
  - b. 56-84 days of gestation
  - c. Second trimester
  - d. 36 weeks onwards
6. In drug metabolism, hepatic cytochrome P-450 (CYP-450) system is responsible for :
  - a. Phase I reactions
  - b. Phase II reactions
  - c. Both (a) and (b)
  - d. Converting hydrophilic metabolites to lipophilic metabolites
7. All of the following statements for COX-2 are correct EXCEPT :
  - a. Induced at the site of inflammation
  - b. Activation of COX-2 leads to ulcer protective effect on gastric mucosa
  - c. It is constitutionally expressed on some cell surfaces
  - d. It is utilized in generation of eicosanoids with a ring structure
8. Which of the following drug is commonly used in narcoanalysis?
  - a. Atropine sulfate
  - b. Scopolamine hydrochloride
  - c. Phenobarbitone
  - d. Morphine
9. For which of the following drugs a warning is written: 'To be sold by retail on the prescription of registered medical practitioner only'.
  - a. Schedule C
  - b. Schedule X
  - c. Schedule Y
  - d. Schedule H
10. Antihistaminics used for motion sickness is :
  - a. Cetirizine
  - b. Meclizine
  - c. Diphenhydramine
  - d. Fexofenadine



11. The sympathetic and parasympathetic systems exert functionally opposite influences on the following parameters except:
  - a. Heart rate
  - b. Atrial refractory period
  - c. Pupil diameter
  - d. Intestinal motility
12. Gastric lavage is contraindicated in :
  - a. Salicylate poisoning
  - b. Organophosphate poisoning
  - c. Kerosene poisoning
  - d. Morphine poisoning
13. Regarding efficacy and potency of a drug all are true EXCEPT :
  - a. In a clinical setup, efficacy is more important than potency
  - b. In the log dose response curve, the height of the curve corresponds with efficacy
  - c. ED<sub>50</sub> of the drug corresponds to the efficacy
  - d. Drugs that produce similar pharmacological effect can have different levels of efficacy
14. Tachyphylaxis is seen after use of:
  - a. Tamoxifen
  - b. Ephedrine
  - c. Morphine
  - d. Chlorpromazine
15. Correctly matched pair of heavy metal and its respective chelating agent is :
  - a. Iron - BAL
  - b. Mercury - Calcium disodium edetate
  - c. Copper - d-penicillamine
  - d. Arsenic - Desferioxamine
16. Caution is advised for the use of Aspirin in which of the following group of patients :
  - a. In diabetics - can cause hyperglycaemia
  - b. In children with viral disease - risk of acute renal failure
  - c. In gout - can increase serum uric acid levels
  - d. In pregnancy- risk of teratogenicity
17. Timolol eye drops are preferred over pilocarpine eye drops by glaucoma patients because :
  - a. Timolol is more effective than pilocarpine
  - b. Timolol acts by enhancing uveo-scleral outflow
  - c. Timolol produces less ocular side effects
  - d. There are no contraindications to timolol



18. Use of morphine in preanaesthetic medication:
- Is routine except in the presence of contraindications
  - Is restricted to patients being anaesthetised with ether
  - Should be made only in combination with atropine
  - Is restricted mostly to patients in pain preoperatively
19. How would a drug that competes with ACh for receptors at the motor end plate affect skeletal muscle? It would :
- Produce uncontrolled muscle spasms
  - Cause the muscles to contract and be unable to relax
  - Cause muscles to relax and be unable to contract
  - Make the muscles more excitable
20. Transdermal drug delivery systems offer the following advantages EXCEPT :
- Produces high peak plasma concentration of the drug
  - Produces smooth and non-fluctuating plasma concentration of the drug
  - Minimises inter-individual variations in the achieved plasma drug concentration
  - Avoids hepatic first-pass metabolism of the drug

**Q. 2**

**Answer in brief [any five] :**

[3×5=15]

- Explain the concept of "Placebo".
- Compare and contrast neostigmine vs physostigmine.
- What is microsomal enzyme induction? Give suitable examples.
- Define drug antagonism. Describe its types with suitable examples.
- Short note on kinetics of elimination.
- Enumerate therapeutic uses and adverse effects of selective COX-2 inhibitors.

**Q. 3**

**Write short notes [any three] :**

[5×3=15]

- Classify  $\alpha$  - blocker drugs. Discuss their therapeutic uses and adverse effect profile.
- Which drugs are indicated for glaucoma? Discuss the pharmacotherapy for open angle glaucoma.
- Describe the concept of potency and efficacy with suitable examples and graphs.
- Enumerate various atropine substitutes and/or derivatives. Describe their clinical uses.



**Q. 4 Case based questions :**

**[10×1=10]**

A 34-year-old female presented with chief complaints of sudden onset of severe pain in the right big toe. Her physical examination and laboratory investigations were suggestive of acute gout. She was prescribed tablet allopurinol 100 mg once a day for one month and tablet naproxen 500 mg twice a day for three days. She returned after 10 days with recurrence of symptoms as severe as the initial episode. On further investigation, she mentioned that the pain had completely subsided initially but had recurred just the previous night.

Answer the following questions :

- a. Was the approach towards the initial episode in this case appropriate? Explain. How will you manage this case? [2+2]
- b. Classify the drugs for gout. [2]
- c. Describe uricosuric agents briefly. [4]

**Section II**

**Q. 5 Answer in brief [any five] :**

**[3×5=15]**

- a. Management of methanol poisoning.
- b. Mention agents used in spinal anaesthesia. Which are the complications of spinal anaesthesia?
- c. Describe pre-anaesthetic medications with their basis of use.
- d. Name two mucolytic agents. Explain briefly role of mucolytic in the treatment of cough.
- e. Classify antipsychotic agents. Describe its adverse effects profile briefly.
- f. Write a note on "Pharmacovigilance".

**Q. 6 Write short notes [any three] :**

**[5×3=15]**

- a. Mention various anti-epileptic agents. Explain the pharmacological basis of phenytoin in grand mal epilepsy. Describe adverse effects of phenytoin.
- b. Enumerate various neuromuscular blocking agents. Explain the difference between non-depolarizing and depolarizing block. Mention two therapeutic uses of succinylcholine.
- c. Classify drugs used in asthma. Write treatment for status asthmaticus.
- d. Write a note on phases of clinical trial.



**Q.7 Case based questions :**

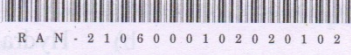
**[10\*1=10]**

A 50-year-old male patient presents to the medicine out-patient department with tremors at rest in one hand, difficulty in initiating movements, mask like face, defective posture and gait along with dementia. After a thorough clinical and central nervous system examination, he was diagnosed as a case of parkinson's disease. The clinician prescribed a combination of levodopa 100 mg and carbidopa 10 mg orally once daily for one month. The patient was asked to visit for follow-up after a month.

Answer the following questions :

- a. Explain the rationale for prescribing a fixed dose combination of levodopa + carbidopa. Discuss the consequences of initial as well as prolonged levodopa therapy. [2 + 2]
- b. Classify the drugs prescribed for parkinsonism. [2]
- c. What is drug induced parkinsonism? How will you treat such a case? [2]
- d. Mention recent developments in the treatment of parkinsonism. [2]





RAN - 2106000102020102

**RAN-2106000102020102****II M.B.B.S. Examination March - 2023****Pharmacology****सूचना : / Instructions**

(१)

नीचे दशविले निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

II M.B.B.S.

Name of the Subject :

Pharmacology

Subject Code No.: 2106000102020102

Seat No.:

Student's Signature

- (2) Encircle the single most appropriate answer.
- (3) Each question carries one mark and there is no negative marking.
- (4) Overwriting is not allowed.

**Q. 1 Multiple Choice Questions. (MCQs)****[Marks 20]**

1. Which diuretic is preferred in cirrhotic ascites ?
  - a) Furosemide
  - b) Spironolactone
  - c) Acetazolamide
  - d) All of the above
2. A clinician diagnosed isoniazid induced neurological disturbances in a 30-year-old male patient on anti-tubercular drug regimen. Which vitamin should be prescribed ?
  - a) Vitamin B1
  - b) Vitamin B6
  - c) Vitamin B12
  - d) Vitamin B2
3. The management of thyrotoxicosis crisis includes all the following except:
  - a) Propranolol
  - b) Hydrocortisone
  - c) Oral I<sup>131</sup>
  - d) Propylthiouracil
4. Combine oral contraceptive pill reduces the risk of:
  - a) Breast cancer
  - b) Ovarian cancer
  - c) Cervical cancer
  - d) Vaginal cancer

RAN-2106000102020102 ]

[ 1 ]

[ P.T.O. ]

P1602



5. Which drug should not be given in pregnancy ?
- Labetalol
  - Hydralazine
  - ACE inhibitors
  - Methyldopa
6. Which of the following statements about octreotide is FALSE ?
- It is used for the treatment of acromegaly
  - It stops oesophageal variceal bleeding
  - It can be used for the management of secretory diarrhoea
  - It is effective orally
7. The following antianginal drug is most likely to produce tachycardia as a side effect:
- Amlodipine
  - Nifedipine
  - Diltiazem
  - Verapamil
8. When are proton pump inhibitors most effective ?
- After meals
  - Along with H2 blockers
  - Shortly before meals
  - During prolonged fasting periods
9. Which of the following purgative increases the fecal bulk due to their water absorbing and retaining capacity ?
- Methyl cellulose
  - Lactulose
  - Liquid paraffin
  - Diocetyl sodium sulfosuccinate
10. The drug of choice for neurocysticercosis is :
- Albendazole
  - Niclosamide
  - Praziquantel
  - Ivermectin
11. The multidrug therapy of leprosy is superior to monotherapy on the following basis :
- It prevents emergence of dapsone resistance
  - It is effective in cases with primary dapsone resistance
  - It shortens the total duration of drug therapy and improves compliance
  - All of the above
12. Dobutamine is preferred over dopamine in cardiogenic shock because of its relatedness to :
- Better cardiac stimulation
  - Less peripheral vasoconstriction
  - Lower risk of cardiac arrhythmias
  - More CNS stimulation



13. Which antifungal agent is effective in both dermatophytosis as well as systemic mycosis :
- a) Amphotericin B                      b) Griseofulvin  
c) Clotrimazole                         d) Ketoconazole
14. On which enzymes do statins act ?
- a) Acyl CoA synthetase                b) Acyl CoA reductase  
c) HMG CoA synthetase               d) HMG CoA reductase
15. 'Red man syndrome' has been associated with rapid intravenous injection of the following antibiotic :
- a) Vancomycin                         b) Clindamycin  
c) Cefoperazone                        d) Piperacillin
16. Astringents are substances that:
- a) Irritate sensory nerve endings  
b) Precipitate proteins  
c) Penetrate target cell nucleus for their action  
d) All of the above
17. The following anticancer drug has high emetogenic potential:
- a) Vincristine                         b) Chlorambucil  
c) 6-Mercaptopurine                 d) Cisplatin
18. Which vitamin acts as a hormone ?
- a) Vitamin A                            b) Vitamin D  
c) Vitamin C                            d) Vitamin E
19. Select the drug combination which does NOT exhibit supra-additive synergism :
- a) Nalidixic acid + nitrofurantoin  
b) Amoxicillin + clavulanic acid  
c) Pyrimethamine + sulfadoxine  
d) Sulfamethoxazole + trimethoprim
20. Which of the following is NOT a valid indication for parenteral iron therapy ?
- a) Inadequate response to oral iron due to patient non-compliance  
b) Anemia during pregnancy  
c) Severe anemia associated with chronic bleeding  
d) Anemia in a patient of active rheumatoid arthritis



## PHARMACOLOGY PAPER II

**Time: 3 Hours ]**

**[ Total Marks: 100**

### **Instructions:**

- (1) Answers should be precise and to the point.
- (2) Give examples and figures if needed.
- (3) First 20 mins have been allotted to solve multiple choice questions.

### **SECTION I**

**Q. 1 Multiple choice questions. [1×20=20]**

**Q. 2 Answer in brief. [any five] [3×5=15]**

- a) Describe various types of oral contraceptives. What is the rationale of combining estrogen and progesterone for contraception?
- b) Write a note on management of erectile dysfunction.
- c) Classify thyroid inhibitors. Write a note on thyroid storm management.
- d) Outline the pharmacotherapy of psoriasis.
- e) Write a note on drug therapy for constipation.
- f) Discuss briefly about heparin versus warfarin.

**Q. 3 Write short notes. [any three] [5×3=15]**

- a) Discuss various insulin preparations available. Write in detail about newer insulin preparations, their uses, pros and cons of each.
- b) Mention various thrombolytic agents. Describe their uses, mechanism of action and precautions required while using them.
- c) Classify diuretic agents. Explain mechanism of action, uses and adverse effect profile of thiazide-like diuretics in detail.
- d) Enumerate commonly used glucocorticoids. Discuss their adverse effect profile.



**Q. 4 Case based questions :**

**[10×1=10]**

An adult 46-year-male, an executive in a multi-national company, has complaints of pain in abdomen since a month, along with occasional heart burn due to which he is unable to sleep. It worsens with ingestion of spicy and oily meals. After a thorough examination, physician diagnosed him as a case of peptic ulcer. Along with appropriate diet and lifestyle modifications, physician prescribed him anti-ulcer drugs.

**Answer the following questions :**

- a) Enumerate various drugs from different groups which can be prescribed to him along with mechanism of action of any two drug classes. [4]
- b) Write briefly about treatment regimens for H. pylori infection. [4]
- c) Which drugs should be prescribed to the above patient if he develops gastroesophageal reflux disease (GERD)? [2]

**SECTION II**

**Q. 5 Answer in brief. [any five]**

**[3×5=15]**

- a) Write a short note on anti-hypertensives in pregnancy.
- b) Elaborate mechanism of action, therapeutic uses and adverse effects of metronidazole.
- c) Outline the pharmacotherapy of urinary tract infection.
- d) Describe measures to prevent antimicrobial drug resistance in detail.
- e) Enumerate HMG-CoA reductase inhibitors along with their uses.
- f) What is post exposure prophylaxis for HIV infection? Write two NACO recommended regimens for same.

**Q. 6 Write short notes. [any three]**

**[5×3=15]**

- a) Classify fluoroquinolones. Describe the mechanism of action, therapeutic uses and adverse effects of any one fluoroquinolone.
- b) Enlist anti-malarial drugs. Discuss the treatment regimens for chloroquine resistant P. falciparum malaria.
- c) Describe in detail general principles for cancer chemotherapy.
- d) Which are the drugs for congestive heart failure? Discuss the mechanism of action of digoxin in this scenario.



**Q. 7 Case based questions :**

**[10×1=10]**

A 50-year-old male patient was admitted to casualty with chief complaints of heaviness in chest, squeezing midsternal pain which was radiating to jaw and left shoulder without any precipitating factor, lasting for about few minutes. He was sweating profusely. His electrocardiogram showed ST segment elevation. He was diagnosed as having acute myocardial infarction.

**Answer the following questions :**

- a) Write in detail about the management of above-mentioned diagnosis. [5]
- b) Enumerate various anti-anginal drugs. [3]
- c) What is the rationale of using  $\beta$  blocker + long-acting nitrate combination in classical angina? [2]