

2406000102010501-S
(SUPPLEMENTARY EXAM) FEBRUARY-2025
SECOND MBBS
PHARMACOLOGY (PAPER - I) (NEW) (OMR)

[Time: As Per Schedule]

[Max. Marks: 100]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **SECOND MBBS**
- b. Name of the Subject : **PHARMACOLOGY (PAPER - I) (NEW) (OMR)**
- c. Subject Code No : **2406000102010501-S**

- 2. Sketch neat and labelled diagram wherever necessary.
- 3. Figures to the right indicate full marks of the question.
- 4. All questions are compulsory.
- 5. First 20 mins has been allotted for MCQs.
- 6. Answers must be brief, precise and to the point.

Seat No:

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Student's Signature

Section I

Q.1 Multiple choice questions (MCQs)

1 × 20

(Each Question Carries one mark and there is no negative marking)

- 1. Which of the following agent binds to GABA receptor Chloride channel complex?
 - a) Ethanol
 - b) Alphaxolon
 - c) Zolpidem
 - d) Buspirone
- 2. Alpha-receptor stimulation includes all of the following effects EXCEPT:
 - a) Relaxation of gastrointestinal smooth muscle
 - b) Contraction of bladder base, uterus and prostate
 - c) Stimulation of insulin secretion
 - d) Stimulation of platelet aggregation

3. Which of the following agents enhances the bioavailability of Levodopa in patients with Parkinson's disease:
- a) Amantadine
 - b) Ropinirole
 - c) Entacapone
 - d) Selegiline
4. Mechanism of action of Mianserin:
- a) Inhibits alpha-adrenergic, H₁, and some types of serotonin receptors.
 - b) Inhibits alpha-adrenergic, H₂, and some types of serotonin receptors.
 - c) Inhibits beta-adrenergic, H₁, and some types of serotonin receptors.
 - d) Inhibits alpha- adrenergic and H₁ receptors.
5. Omalizumab is indicated for which of the following conditions:
- a) Multiple myeloma
 - b) Psoriasis
 - c) Bronchial Asthma
 - d) Rheumatoid Arthritis
6. Which of the following drug undergoes Hoffman's elimination?
- a) Atracurium
 - b) Pancurinium
 - c) Mivacurium
 - d) Vecuronium
7. Which of the following is an example of physiological antagonism?
- a) Heparin-protamine
 - b) Prostacycline-thromboxene
 - c) Adrenaline-phenoxybenzamine
 - d) Physostigmine-Acetylcholine
8. Following are uses of anticholinesterases. EXCEPT.
- a) Alzheimer's disease
 - b) Myasthenia gravis
 - c) Organophosphorus poisoning
 - d) Glaucoma

9. A 3-year-old child was undergoing squint surgery, initial heart rate was 140 beats per min. after anaesthesia and start of surgery heart rate dropped to 40 beats/min. what should be the next step?
- a) Stop surgery b) Decrease plane of anaesthesia
c) Inj glycopyrrolate d) Inj atropine
10. Which of the following does not potentiate the action of neuro-muscular blocker?
- a) Hypothermia b) pH changes
c) Halothane d) Hyperkalaemia
11. After which phase of clinical trial a new drug is marketed?
- a) Phase I b) Phase II
c) Phase III d) Phase IV
12. For pre-anesthetic medication all drugs can be used EXCEPT.
- a) Diazepam b) Glycopyrrolate
c) Metoclopramide d) Phenobarbitone
13. Which of the following drug is effective in painful tingling sensation due to diabetic neuropathy:
- a) Aspirin b) Ibuprofen
c) Gabapentin d) Tramadol
14. Drug of choice for myoclonic seizures is:
- a) Valproic acid b) Phenytoin
c) Ethosuximide d) Carbamazepine
15. Which of the following agent is used for acute iron poisoning?
- a) Penicillamine b) Deferasirox
c) Desferioxamine d) Dimercaprol

16. Alkaline diuresis is done for treatment of poisoning due to:

- a) Barbiturates
- b) Morphine
- c) Amphetamine
- d) Ethyl alcohol

17. Which of the following statement is wrong about Buspirone?

- a) It doesn't produce withdrawal symptoms on stoppage.
- b) It doesn't produce sedation
- c) It has anticonvulsant action
- d) It has no muscle relaxant activity

18. Inverse agonist has

- a) Affinity but no intrinsic activity
- b) Affinity and submaximal intrinsic activity
- c) Affinity but intrinsic activity with minus sign
- d) Both affinity and maximal intrinsic activity

19. A young patient is being treated for myasthenia gravis, which requires frequent adjustment of the optimal dose of Neostigmine. The patient is challenged with Edrophonium to evaluate the effectiveness of the cholinesterase inhibition. Optimal dosing will be indicated by

- a) An increase in muscle strength
- b) A decrease in muscle strength
- c) No change in muscle strength
- d) Initially increase and later on decrease in muscle strength

20. A 3 year old child presented to OPD with the symptoms of influenza. Aspirin is contraindicated in this patient because of increased risk of

- a) Gastric bleeding
- b) Thrombocytopenia
- c) Fanconi syndrome
- d) Reye's syndrome

Q.2 Answer in Brief[any Five]:**3 × 5 = 15**

- a. Explain the first order kinetics and zero order kinetics with suitable diagram and examples.
- b. Compare and contrast depolarizing and non-depolarizing neuromuscular blockers.
- c. Write advantages of atypical antipsychotics. Explain in brief about extrapyramidal side effects of antipsychotics.
- d. Write a note on triptans.
- e. Give rationale behind: (A) Tamsulosin in benign prostate hypertrophy (B) Colchicine in acute gout.
- f. Classify DMARDs. Explain the role of methotrexate in rheumatic arthritis.

Q.3 Write answer in details [any three]:**5 × 3 = 15**

- a. Describe adverse effects, contraindications, and therapeutic uses of β - blockers.
- b. Classify anticholinergic drugs. Describe the treatment of smoking cessation.
- c. Classify antiepileptic drugs. Describe adverse effects of phenytoin and valproic acid. Write down the treatment of febrile convulsion.
- d. Describe various factors that modifying drug actions.

Q.4 Answer the following based on given case scenario.

10 × 1 = 10

A 40-year-old patient known case of moderate chronic asthma with frequent exacerbation, brought to the emergency department with severe breathlessness. Patient took MDI Salbutamol at home, but it did not relieve the symptoms. Patient was on MDI FORACORT (Formoterol + Budesonide) BD from last 6 months. Patients' current diagnosis is status asthmaticus. Answer the following.

- a. Classify anti-asthmatic drugs Describe the drug therapy for status asthmaticus with its pharmacological basis.
- b. What is the rationale behind the Formoterol + Budesonide combination?
- c. Write down adverse effects of inhaled corticosteroids and how it can be minimized?

Section II

Q.5 Answer in Brief[any Five]:

3 × 5 = 15

1. Write a note on drug antagonism.
2. Which are the distinctive features of second generation anti-histaminic? Explain the role of cinnarizine in vertigo.
3. Describe pharmacotherapy of methanol poisoning.
4. Which are specific antidotes of acute anticholinesterase poisoning? Write the rationale of using these drugs.

5. Describe pharmacological basis of aspirin in myocardial infarction and preeclampsia. Enumerate its contraindications.
6. Why local anesthetics should not use in inflamed tissue? Comment on addition of adrenaline to local anesthetics.

Q.6 Write answer in details [any three]:**5 × 3 = 15**

- a. Describe adverse effects, contraindications/precautions, and therapeutic uses of morphine.
- b. List sympathomimetic drugs. Describe therapeutic uses of adrenalin with pharmacological basis.
- c. Classify antidepressant drugs. Describe adverse effects of TCAs. List the uses of SSRIs.
- d. Define Pharmacovigilance and adverse drug reactions. Explain in brief about drug withdrawal reactions and teratogenicity with appropriate examples.

Q.7 Answer the following based on given case scenario.**10 × 1 = 10**

A 62-year female patient came to OPD with complaint of tremors in hands that also occurs during rest, difficulty walking, problems with coordination and difficulty speaking for 3 months. Patient diagnosed with Parkinson's diseases. Patient prescribed with combination of levodopa 100 mg + carbidopa 10 mg tablets once a day. Answer the following:

- A. Classify the drug's use for Parkinson's diseases
- B. Describe in detail about various adverse effects of levodopa therapy
- C. Describe benefits and drawbacks of levodopa and carbidopa combination
- D. Which drugs produce Parkinson's like symptoms? Which drugs are given in treatment of drug induced Parkinsonism.

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