

# ANS

(2)

## Q. No. 2.

- (a) Classify anticholinergic drugs according to their therapeutic uses. (4)
- (b) Write names of 3 drugs used in myasthenia gravis. (3)

## Q. No. 2.

- (a) Salbutamol in Asthma. (2)
- (b) Dopamine in cardiogenic shock. (1)
- (c) Prozosine in benign prostatic hyperplasia. (2)
- (d) Timolol in glaucoma. (2)

## Q. No. 3.

- (a) Enumerate 3 imp. uses of adrenaline. (3)
- (b) Name 2 drugs used in organophosphate poisoning. (2)
- (c) What is epinephrine reversal (Dale's phenomenon)?

## Q. No. 4.

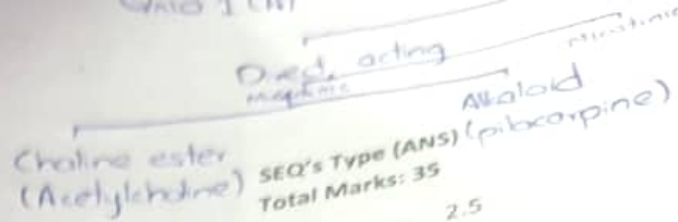
- (a) Write down 5 imp. uses of propranolol. (5)
- (b) Write 2 interactions of Propranolol.

## Q. No. 5

- Write down 2 imp. A/E of:
- (a) Alpha blockers.
  - (b) Atropine
  - (c) B-blockers.
  - (d) Neostigmine.

Pharmacology & Therapeutics  
Time Allowed: 1 hour

ANS



1. a. Classify cholinergic agonist drugs? 60K
  - Enumerate drugs used in treatment of glaucoma? 89 (TAP) (ADP)
  - Give drug treatment of organophosphate poisoning? (ADP)
  - Enumerate drugs used in treatment of BPH? 92
  - Explain why prazosin is preferred over other alpha blockers in treatment of hypertension? 2
  - Explain epinephrine reversal? 2.5
  - Name cardio selective beta blockers? 2.5
  - Give clinical uses of beta blockers? 2.5
  - Enumerate uses of atropine? Give their adverse effect? 78K
  - Classify sympathomimetics on the basis of receptor selectivity? 76K
  - Enumerate adrenergic receptors with their locations & functions in tabulated form? 52 (2.5+2.5)

7. SHORT NOTES ON

a. Uses of Adrenaline

b. MOA of Dopamine

Q No 2

(A) Treatment of BPH

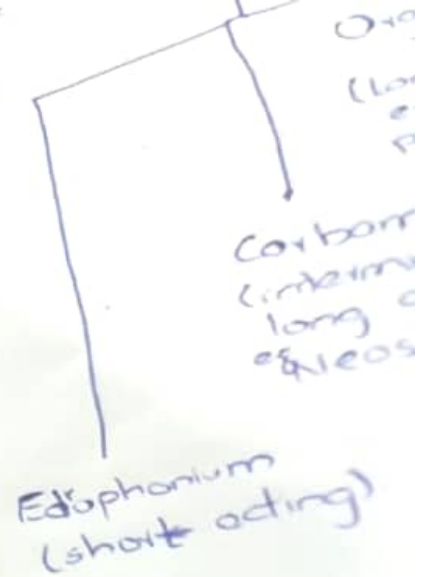
- (i) Prazosin
- (ii) Doxazosin
- (iii) Terazosin
- (iv) Tamsulosin

(B)  
Prazosin is preferred over other alpha blocker because it reduce the blood pressure with much less reflex tachycardia.

Q No 2

(c) Epinephrine Reversal:

The term refer to as reversal of BP when given large amount of epinephrine from a pressor response (mediated by  $\alpha$  receptor) to a depressor response (mediated by  $\beta_2$  receptor)



DEPARTMENT OF PHARMACOLOGY

Max Marks: 30

Time Allowed: 60 mins.

SEQ's (Drugs Acting on ANS)

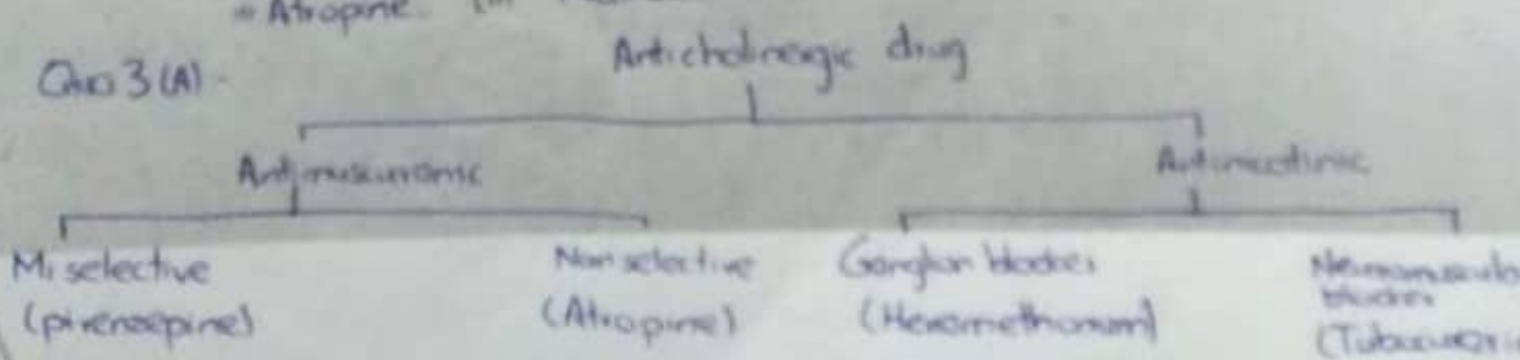
1. Give in tabulated form the location, Structural features and Post receptor Mechanism of muscarinic receptors. 3
2. How will you treat a patient of organophosphate poisoning. What is enzyme Aging. 3
3. a) Classify anticholinergic drugs according to receptor selectivity. 3  
 b) Write down Therapeutic uses and contraindications of Atropine? 3  
 c) Describe pharmacological actions of atropine on CVS. 3  
*→ If it is given in low dose it blocks vagus & if given in high dose it blocks both*
4. a) Enumerate adrenoceptors with their location. 2  
 b) How does Epinephrine differs from Norepinephrine in terms of: 2  
 i) Respiratory system. ii) Cardiovascular actions  
 c) Give clinical indications of sympathomimetics.
5. a) Explain why does Prazosin cause less reflex tachycardia as compared to phentolamine? 1  
 b) Classify adrenergic antagonists on the basis of receptor selectivity. 1  
*→ It is because phentolamine is antagonist of all α receptors & prazosin is α1 antagonist*
6. What are the pharmacological basis for the use of following drugs: 16/100  
 i. Prazosin in Benign prostatic hyperplasia  
 ii. Timolol in Glaucoma  
 iii. Neostigmine in Myasthenia Gravis  
 iv. Propranolol in hypertension

Qno 1:

Receptor	Location	Mechanism	Function
M <sub>1</sub>	Nerve ending	Gq coupled	↑ IP <sub>3</sub> , DAG cascade ↓ cAMP
M <sub>2</sub>	Heart, some nerve ending	Gi coupled	↑ IP <sub>3</sub> , DAG cascade
M <sub>3</sub>	Smooth muscle	Gq coupled	

Qno 2. Organophosphate aging: When organophosphate bind to cholinesterase chemically modified & E become more firmly attach to enzyme  
 Organophosphate poisoning: i) Atropine. ii) Pridloxime iii) Diazepam

Qno 3 (A)



# Pharma ANS

2+3

2016

Monthly Test 3<sup>rd</sup> Year MBBS (SEQ's)

(Drugs Affecting Autonomic Nervous System)

Ans 2<sup>nd</sup> Half  
(Cholinergic Drugs)

Max Marks: 30

Time Allowed: 50 min

Attempt all questions. All question carry equal marks.

1. a) What are pharmacological basis of Muscarinic Agonist for the use in eye and GIT problems?

b) Explain why Neostigmine is preferred to Physostigmine in Myasthenia Gravis?

2. Give in tabulated form the location, Structural features and Post receptor Mechanism of muscarinic receptor type 1, 2, 3 and nicotinic receptors Na and Nm.

3. a) Name organophosphate compounds. What is Aging?

b) How will you treat a patient of organophosphate poisoning?

4. a) Classify anticholinergic drugs?

b) Write down Therapeutic uses of Atropine?

5. Enumerate ganglion blockers. What are their adverse effects?

6. a) Describe pharmacological actions of atropine on CVS at therapeutic doses.

b) Write 3 contraindications of Antimuscarinic drugs?

- 1. Acute angle glaucoma
- 2. BPH
- 3. Hypertensive patient.
- or childrens.

Pg 63 K Table

Pg 51 K

Pg 61 K

1.5+1  
2.5  
2.5  
2.5  
2.5  
2.5  
3

Phosphorylated cholinesterases may undergo dealkylation leading to aged enzyme inhibited enzyme into non-se.

IVBA

### Questions/Assignments - 3<sup>rd</sup> Round

#### Autonomic Nervous System MBBS 3<sup>rd</sup> Year

- Q1. A) Describe the effects of acetylcholine on cardiovascular system. *Handwritten notes: 3h, 100% of ACh, 100% of ACh, 100% of ACh*
- Q1. B) How do direct acting cholinomimetics differ from indirect acting cholinomimetics? *62K*
- Q2. What is the mechanism of action of organophosphates? Describe the acute toxicity of organophosphate poisoning? How acute organophosphate poisoning is managed? *64K*
- Q3. A) Write names of indirectly acting cholinomimetics used in the diagnosis and management of myasthenia gravis. *68K*
- Q3. B) Write names of indirectly acting sympathomimetics. Write their clinical uses. *87K*
- Q4. A) What are the clinical uses of sympathomimetics other than myasthenia gravis? *87K*
- Q4. B) What are the clinical applications of  $\alpha_2$  antagonists? *97K*
- Q5. A) What is the mechanism of action of clonidine? What are the clinical uses of clonidine? *88Lip*
- Q5. B) Classify adrenoceptor agonists on the basis of  $\alpha$ ,  $\beta$  and D receptors selectivity. *79K*
- Q6. A) What is the rationale for use of  $\beta$  blockers in hyperthyroidism and heart failure? Write names of specific  $\beta$  blockers used in the treatment of heart failure. *1+1+1*
- ~~Q6. B)~~ Name four anticholinergic drugs and give their therapeutic uses. *67, 68, 69L*
- ~~Q7. A)~~ What is the role of  $\alpha$  and  $\beta$  antagonists in the management of pheochromocytoma? What is the sequence of use of these antagonists? Name drugs used in its treatment. *From notes*
- Q7. B) Write names of two ganglion blocking drugs. *77K*
- Q8. What are the two contraindications for use of  $\beta$  blockers? Why are  $\beta$  blockers contraindicated in these conditions? What are the adverse effects of  $\beta$  blockers? *From notes*
- ~~Q9.~~ Classify with examples the drugs used in the treatment of glaucoma, what is the mechanism of action of each group. *93K*
- Q10. Explain the pharmacological basis for the use of the following:
- A) Salbutamol in Asthma *wadood*
- B) Dopamine in cardiogenic shock *92L*
- C) Tamsulosin in Benign prostatic hyperplasia (BPH) *97L*
- Q11. A) Enumerate three important uses of Adrenaline. *84L*
- Q11. B) What is Epinephrine reversal (Dales's phenomenon)?
- Q12. Write down two important adverse effects of:
- A) Alpha blockers *96L*
- B) Atropine *68L*
- C) Neostigmine *95L*

# Questions/Assignments - 3<sup>rd</sup> Round

## Autonomic Nervous System MBBS 3<sup>rd</sup> Year

- Q1. A) Describe the effects of acetylcholine on cardiovascular system. *Notes* 3
- Q1. B) How do direct acting cholinomimetics differ from indirect acting cholinomimetics? *b2 Katzung* 2
- Q2. What is the mechanism of action of organophosphates? Describe the acute toxicity of organophosphate poisoning? How acute organophosphate poisoning is managed? *by Katzung* 1+3+1
- Q3. A) Write names of indirectly acting cholinomimetics used in the diagnosis and management of myasthenia gravis. *b8 Katzung (Amphetamine)* 3
- Q3. B) Write names of indirectly acting sympathomimetics. Write their clinical uses. *87 Katzung* 2
- Q4. A) What are the clinical uses of sympathomimetics other than myasthenia gravis? *87 Katzung* 3
- Q4. B) What are the clinical applications of  $\alpha_2$  antagonists? *97 Katzung Notes* 2
- Q5. A) What is the mechanism of action of clonidine? What are the clinical uses of clonidine? *88 Lippincott Notes* 1+2
- Q5. B) Classify adrenoceptor agonists on the basis of  $\alpha$ ,  $\beta$  and D receptors selectivity. *79 Katzung 2 Notes*
- Q6. A) What is the rationale for use of  $\beta$  blockers in hyperthyroidism and heart failure? Write names of specific  $\beta$  blockers used in the treatment of heart failure. *Notes* 1+1+1
- Q6. B) Name four anticholinergic drugs and give their therapeutic uses. *b7, b8, b9 Lippincott 2 Notes*
- Q7. A) What is the role of  $\alpha$  and  $\beta$  antagonists in the management of pheochromocytoma? What is the sequence of use of these antagonists? Name drugs used in its treatment. *From notes* 2+1+1
- Q7. B) Write names of two ganglion blocking drugs. *Not Katzung* 1
- Q8. What are the two contraindications for use of  $\beta$  blockers? Why are  $\beta$  blockers contraindicated in these conditions? What are the adverse effects of  $\beta$  blockers? *From notes* 1+2+2
- Q9. Classify with examples the drugs used in the treatment of glaucoma, what is the mechanism of action of each group. *a3 Katzung* 5
- Q10. Explain the pharmacological basis for the use of the following: *Notes*
- A) Salbutamol in Asthma *wadood* 2
- B) Dopamine in cardiogenic shock *a2 Lippincott* 1
- C) Tamsulosin in Benign prostatic hyperplasia (BPH) *97 Lippincott ABC* 2
- Q11. A) Enumerate three important uses of Adrenaline. *87 Lippincott* 3
- Q11. B) What is Epinephrine reversal (Dale's phenomenon)? *Wadood* 2
- Q12. Write down two important adverse effects of: *Notes*
- A) Alpha blockers *98 Lippincott* 2
- C) Neostigmine *59 Lippincott* 1
- B) Atropine *b8 Lippincott* 2