NC-2106000102020101

Second Year M. B. B. S. Examination

December - 2021

Pharmacology : Paper-I

(New Curriculum)

Time : Hours] [Total Marks :

Instruction :

(1)

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

Name of the Examination :

☛ **Second Year M. B. B. S.**

Name of the Subject :

☛ **Pharmacology : Paper-I**

☛ Subject Code No. : **2 1 0 6 0 0 0 1 0 2**

☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Answers must be brief, precise and to the point

(3) Give suitable examples and draw figures where necessary

1 Multiple choice questions (MCQs) **1×20=20**

2 Answer the following: (Any five) **3×5=15**

(1) Write short note on "Dissociative anaesthesia"

(2) Enumerate phases of clinical trial. Write a note on "post marketing surveillance"

(3) Compare and contrast depolarizing and non-depolarizing neuromuscular blockers.

(4) Enlist various drugs from different categories for Parkinson's disease (PD). Justify rationale of using l-dopa + Carbidopa combination for PD.

(5) Enlist various H_1 anti-histaminics. Write advantages of second generation over first generation antihistaminics.

(6) Enumerate various antisychotic drugs from different categories. Describe their effects on behaviour and motor activity of psychotic.

3 Answer the following: (Any **three**) **5×3=15**

(1) Enumerate various drugs from different categories used for the treatment of bronchial asthma. Describe mechanism of action, preferred route of administration and side effects of any one group of drugs which you mentioned ?

(2) Enumerate various β-blockers. Describe their uses giving the pharmacological basis for each use which you mentioned ?

(3) Describe the process of synthesis, storage, release and uptake of catecholamine. Describe the difference in cardiovascular effects of adrenaline and noradrenaline.

(4) Discuss various situations where drug interactions are likely to occur. Give suitable examples for each situation.

4 Answer the following questions based on given case scenario. **10**

(1) A 35 years old farm worker was spraying some agricultural insecticide in his farm. After 1 hour he has started developing irritiation in eyes, lacrimation, excessive sweating, salivation and blurring of vision. He was brought to the emergency department, where on examination patient was irritable and had bilateral constricted pupil, bradycardia, increased tracheobronchial secretion, hypotension, difficulty in breathing, and tremors. He is diagnosed as a case of agricultural insecticide poisoning and treatment was given accordingly.

(i) Which agents are responsible for this agricultural insecticide poisoning? **1**

(ii) Explain pharmacological basis behind the presentation (sign and symptoms) of this patient. **2**

(iii) Which non-pharmacological measures will you take initially to manage this patient? 2

(iv) Which specific antidotes will you give to this patient? How will you administer these antidote in this patient. 1+2

(v) Write pharmacological basis of these antidotes in given case condition. 2

SECTION - II

5 Answer the following: (Any **five**) 3×5=15

(1) Explain with examples: How "PSYCHOLOGICAL" and "GENETIC" factors can affect response of a drug ?

(2) Name two Prostaglandin (PG) analogues used in glaucoma. Write Pharmacological basis of use of PG analogues in glaucoma.

(3) Give reasons: (i) Why there is photophobia with atropine but not so with phenylephrine? (ii) Why is it not advisable to use epinephrine with local anaesthetic when collateral circulation is poor?

(4) What is down and up regulation of receptors? Describe its importance with suitable examples in clinical practice.

(5) Write short note on antitussive agents.

(6) Describe cardiovascular uses of dopamine. Compare and contrast dopamine and dobutamine.

6 Short essay type questions: (Any **three**) 5×3=15

(1) Mention two therapeutic chelating agents. Explain their mechanism and write therapeutic indications of each agent.

(2) Classify Nonsteroidal anti-inflammatory drugs (NSAIDs). Describe uses and adverse effects of aspirin.

(3) Explain various types of drug antagonism based on their mechanisms with help of suitable examples.

(4) Write Pharmacotherapy of migraine.

7 Answer the following questions based on given case scenario. **10**

A young man in the emergency department of the hospital, is presented with stupor, flaccidity, shallow and occasional breathing, cyanosis, pinpoint pupil, fall in BP, shock and convulsions. History given by his friend revealed that the patient was an opioid addict since 2 years and used to take this agent intravenously. Immediately gastric lavage was performed and other general and specific measures were taken to manage this patient.

(i) Which principle alkaloid in opium could be responsible for poisoning in above mentioned patient? Describe its pharmacological actions on CNS. Enumerate its adverse effects and contraindications. **1+2+2**

(ii) Enlist other opioid analgesics. **1**

(iii) Which general and specific measures (antidote) might be taken for this patient? **2**

(iv) Why gastric lavage was performed even though this poisoning was due to over consumption of intravenous opioid? Which agent was supposed to be used for gastric lavage in this patient? **1+1**