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DEAR STUDENTS, YOU HAVE 9 ASSIGNMENTS BELOW. PLEASE CHOOSE 4 ASSIGNMENTS AND ANSWER THREE QUESTIONS FROM THE FOUR SELECTED ASSIGNMENTS BEFORE 13 MAY 2020

GOOD LUCK

THE NAME OF SENT FILE BY RITAJ: “YOUR NAME” + ASSIGNMENT

ASSIGNMENT 1: stimulants Drugs

- 1.1 What is the uses of (CNS) stimulants Drugs
- 1.2 How does cocaine produce its effects, and what is the types of it?
- 1.3 Discuss the five schedules for Controlled Drugs
- 1.4 Discuss the CNS Side effects of stimulants Drugs

ASSIGNMENT 2: sedative and hypnotics

- 2.1 Differentiate between a sedative and a hypnotic.
- 2.2 Why the thiobarbiturates get metabolized in vivo faster than the barbiturates? Explain.
- 2.3 Classify barbiturates on the basis of the duration of action with structural examples for each class.
- 2.4 Give the synthetic protocol of nordiazepam.
- 2.5 Discuss in detail the SAR of benzodiazepines.
- 2.6 How do benzodiazepines affect the action of GABA?
- 2.7 Give the general method of synthesis of barbiturates.

ASSIGNMENT 3: general anaesthetics

- 3.1 Classify general anaesthetics with two examples for each class.
- 3.2 Give the complete synthetic protocol for ketamine and etomidate.
- 3.3 Compare the chemical and biological properties of phenobarbitone and thiopentone.
- 3.4 When are narcotic analgesics used along with anaesthetics, and how do they act?
- 3.5 Why is nitrous oxide also called ‘laughing gas’?

ASSIGNMENT 4: local anaesthetics

- 4.1 What is the prototype compound from which other local anaesthetics were designed? Give the structure.
- 4.2 Discuss in detail the SAR of benzoic acid derivatives on local anaesthetic activity.
- 4.3 Justify why propoxycaine hydrochloride is more potent than procaine hydrochloride.
- 4.4 Write in brief about Anilides used as local anaesthetics.

ASSIGNMENT 5: Narcotic Analgesics

- 5.1 Discuss the morphine analogues and give the synthesis of any one of them.
- 5.2 What are the three important alkaloids isolated from *Papaver somniferum*? Write the structure, chemical name, and uses of morphine.
- 5.3 Write a brief note on Narcotic antagonists. Outline the synthesis of Nalorphine hydrochloride.
- 5.4 What are narcotic analgesics? Classify with suitable examples and explain the general mode of action.

ASSIGNMENT 6: Anti-Epileptic Drugs

- 6.1 What are the advantages of fosphenytoin compared to phenytoin?
- 6.2 Define and classify the drugs used for convulsive seizures. Write the structure, chemical name, and uses of one important compound from each class.
- 6.3 Describe the mode of action of Hydantoins and Primidone in the body.
- 6.4 Name the heterocyclic ring present in the following drugs:
Phenytoin, Ethosuximide, Carbamazepine, Trimethadione, Lamotrigine, Phenobarbitone
- 6.5 Explain the structural requirements for a compound to exhibit anticonvulsant properties.

ASSIGNMENT 7: Anti-depressants

- 7.1 Write the mode of action of MAO inhibitors, enumerate the various agents and write the synthesis and uses of Isocarboxazid.
- 7.2 Write the mode of action, and metabolic pathway of Amitriptyline and Imipramine.
- 7.3 Write a note on Selective serotonin reuptake inhibitors used as antidepressants.
- 7.4 What are the two primary neurotransmitters involved in antidepressant action?

ASSIGNMENT 8: Anti-histamine

- 8.1 Define non-sedative antihistamines and their utility
- 8.2 Describe the basic structural requirement for antihistamines
- 8.2 Define H₁ receptor antagonists and their utility
- 8.4 Define histamines and their receptor functionality

ASSIGNMENT 9: Antipyretics and Non-Steroidal Anti-Inflammatory Drugs

- 9.1 Give the names of the heterocyclic ring system present in the following: Analgin, Celecoxib, Rofecoxib, Valdecoxib, Tenoxicam
- 9.2 NSAIDs such as ibuprofen can produce gastrointestinal damage. Why?
- 9.3 What are the advantages of selective COX-2 inhibitors over non-selective NSAIDs? Give examples of COX-2 selective NSAIDs.
- 9.4 What is gout and how is it treated?