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वलय - 015



BP 402
Medicinal Chemistry-I
(724402)

P. Pages : 2

Time : Three Hours

Max. Marks : 75

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Draw well labelled diagram whenever necessary.
5. All questions are compulsory.

1. Answer the following questions in short.

2x10
=20

- i) Give the general formula of direct acting adrenergic agonist?
- ii) Give name 'Second Messenger' involved in adrenergic system.
- iii) What is Ing's rule of five?
- iv) What do you mean by bioisosterism?
- v) Draw the structure of
 - a) Diazepam
 - b) Ethosuximide
- vi) Draw synthetic route for Tolazoline.
- vii) Replacement of oxygen by Sulfur at - C₂ in barbiturate shorten the onset & duration of action. Why?
- viii) Give synthetic route for mefenamic acid.
- ix) Benzodiazepines do not produce Hangover effect. Why?
- x) N-alkylation does not affect the antiepileptic agent?

2. Solve any two.

20

- i) Give chemical classification of hypnotics & Sedative with structure of at least one drug from each class. Outline the general scheme of synthesis for Barbiturates. Discuss SAR of barbiturate class.

ii) Enlist factor affecting drug metabolism? Explain in detail phase - I reduction & hydrolysis reaction with example?

iii) Explain various physiochemical parameters affecting drug action?

3. Solve **any seven** of the following.

35

i) Explain role of cytochrome P - 450 in drug metabolism?

ii) Explain following Phase - II metabolic reaction with one example
a) Glucuronide conjugation b) Acetylation.

iii) Give mechanism of action and SAR of acetylcholine?

iv) Classify drug acting on cholinergic nervous system. Draw chemical synthesis of Neostigmine?

v) Discuss about various sources of new drug?

vi) Explain Ferguson's principle?

vii) Give mechanism of action and SAR of atropine sulphate.

viii) Explain the role of optical isomerism & geometrical isomerism in drug activity with one example.

ix) Draw the structure and give IUPAC name of.

a) Barbitol

b) Halothane

c) Carbamazepine

d) Propranolol

e) Carbachol
