15/12/23

Seat Number | | | | | | |

DAGDU-03

BP-402T

Medicinal Chemistry–I

(724402)

Total Pages : 6]

Time : 3 Hours **Max. Marks : 75**

Note : (1) Do not write anything on question paper except Seat No.

(2) Graph or diagram should be drawn wherever necessary.

(3) No supplement will be provided.

(4) *All* questions are compulsory.

(5) Figures to the right indicate full marks.

1. (A) Choose the *correct* answer of the following : 10

(*i*) How many optical isomers are possible in compound with one chiral carbon ?

(*a*) 5

(*b*) 4

(*c*) 2

(*d*) 3

(*ii*) Basic ring of Barbiturate is ..... .

(*a*) Piperimidine

(*b*) Pyridine

(*c*) Pyrazine

(*d*) None of the above

P.T.O.

(*iii*) Increase the frequency of chloride channel opening is the MoA of ..... .

(*a*) Barbiturates

(*b*) Benzodiazepines

(*c*) Oxazolidine dions

(*d*) Hydantoin

(*iv*) Name of given structure :

(*a*) Phenobarbital

(*b*) Atropine

(*c*) Norepinephrine

(*d*) Isoproferenol

(*v*) 3, 4 position –OH group on phenolic ring will responsible for ..... nature of molecule.

(*a*) Polar

(*b*) Semi-polar

(*c*) Non-polar

(*d*) None of the above

(*vi*) Acetylcholine is hydrolyzed by ..... .

(*a*) Acetate

(*b*) Acetylcholinesterase

(*c*) Acetylcholine transferase

(*d*) None of the above

(*vii*) Replacement of terminal methyl group with $-NH_2$ group show the ..... activity.

(*a*) Muscarinic

(*b*) Nicotinic

(*c*) Both (*a*) and (*b*)

(*d*) None of the above

(*viii*) Benzodiazepines inhibit the ..... receptor.

(*a*) GABA

(*b*) EGFR

(*c*) Nicotinic

(*d*) Muscarinic

(*ix*) Which one of the following is *not* physical property of drug ?

(*a*) Isomerism

(*b*) Dissociation constant

(*c*) Surface activity

(*d*) Ionisation

(*x*) Which of the following is *not* a technique of solubility enhancement ?

(*a*) Ionic bonding

(*b*) H-bonding

(*c*) Precipitation

(*d*) Co-solvent

(B) Answer the following questions : 10

(*i*) Write the ideal properties of general anesthetics.

(*ii*) Define partition coefficient and give its significance.

(*iii*) Draw the following structures :

(*a*) Carbamazepine

(*b*) Adrenaline.

(*iv*) Give synthetic route of Mefenamic acid.

(*v*) Classify para sympathomimetic agent with examples.

2. Solve any *two* : 20

(*i*) Define seddative and hypnotics. Classify the Barbiturates and give the SAR of Barbiturates.

(*ii*) What are Analgesic and Anti-inflammatory drugs ? Classify NSAID and add a note on MoA of it.

(*iii*) Define, classify and explain in detail SAR of Sympathomimetic agents.

3. Solve any *seven* : 35

(*i*) Explain the following terms :

(*a*) Bioisosterism

(*b*) Prodrugs with examples.

(*ii*) Write the synthesis of propranolol.

(*iii*) Classify Neurotransmitters with examples. Describe the synthesis and release of Acetylcholine.

(*iv*) What are Narcotic antagonists ? Explain the chemistry of any *two* Narcotic Antagonists.

(*v*) What are phase-I reactions ? Why phase-I reactions are classed as functionalization reactions ?

(*vi*) Explain biosynthesis and catabolism of catecholamine.

(*vii*) Give the SAR of salicylic acid derivatives.

(*viii*) Write a brief note on Inhalation anesthetics.

(*ix*) Describe the SAR and MOA of Morphine.