Enrolment Number					

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Winter, 2025/29/05

B. Pharm 4th Semester Examination

Medicinal Chemistry-I

Course Code: BP402T

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Full Marks - 75

I.

Time - 3 hours

The figure in the margin indicates full marks for the questions.

An	swer all the following MCQs	$20 \times 1 = 20$				
i.	Which of the following is the	most common phase reactions that occur in human body?				
	a) Oxidation	c) Reduction				
	b) Glucuronide conjugation	d) Both (a) & (b)				
ii.	Which of the following is not	an enzyme inducer?				
	a) Carbamazepine	c) Griseofulvin				
	b) Allopurinol	d) Phenytoin				
iii.	Which of the following sympathomimmetics is used as nasal drops?					
	a) Xylometazoline	c) Dobutamine				
	b) Terbutaline	d) Clonidine				
iv.	Which drug is a selective bet	a-2 agonist?				
	a) Dobutamine	c) Salbutamol				
	b) Isoprenaline	d) Norepinephrine				
V.	Which of the following drug	s is a non-selective alpha adrenergic antagonist?				
	a) Phentolamine	c) Prazosin				
	b) Yohimbine	d) Propanolol				
vi.	Which of the following beta-blockers has intrinsic sympathomimetic activity (ISA)?					
	a) Pindolol	c) Timolol				
	b) Atenolol	d) Propanolol				
vii.	Which of the following is a	direct-acting cholinergic agonist?				
	a) Neostigmine	c) Pilocarpine				
	b) Atropine	d) Physostigmine				
viii.	Which of the following drug	gs is used to treat myasthenia gravis?				
	a) Rivastigmine	c) Endrophonium				
	b) Atropine	d) Succinylcholine				
ix.	Which of the following cho	linergic drugs does not cross the blood-brain barrier?				
	a) Neostigmine	c) Physostigmine				
	b) Donepezil	d) Pilocarpine				
х.	The anticholinergic drug us	ed against Parkinsonian disease is:				

	a) Oxybutynin	c) Tropicamide
	b) Biperiden	d) Both (a) & (c)
xi.	A patient on oxybutynin fo	or overactive bladder is most likely to complain of which side effect
	a) Dry cough	c) Dry mouth
	b) Diarrhea	d) Increased sweating
xii.	Which of the following is	an ultra short acting barbiturates?
	a) Secobarbitone	c) Amylobarbitone
	b) Methohexital Na	d) Butobarbitone
xiii.	Which of the following is	used as an antidote for benzodiazepine overdose?
	a) Naloxone	c) Flumazenil
	b) Atropine	d) Fomepizole
xiv.	Which antipsychotic is lea	ast likely to cause weight gain?
	a) Olanzapine	c) Riserpidone
	b) Aripiprazole	d) Clozapine
XV.	A serious skin reaction (S	tevens-Johnson syndrome) is most associated with:
	a) Leviteracetam	c) Lamotrigine
	b) Gabapentine	d) All of the above
xvi.	Which inhalational anesth	netic is preferred for day care (outpatient) surgery due to rapid onset
	and recovery?	c) Halothane d) Sevoflurane n of narcotic analgesics is: c) Cerebral cortex d) Spinal cord and brainstemas a synthetic opioid analgesic? Girilana da harmon a para da synthetic opioid analgesic? Girilana da harmon a para da harm
	a) Desflurane	c) Halothane
	b) Isoflurane	d) Sevoflurane Centra Unitary
xvii.	The primary site of action	of narcotic analgesics is:
	a) Peripheral nerves	c) Cerebral cortex (nond Chord
	b) Hippocampus	d) Spinal cord and brainstems (1800) do
xviii.	Which of the following is	s a synthetic opioid analgesic? Gilly atthe
	a) Codeine	c) Heroin
	b) Fentanyl	
xix.	Which of the following N	ISAIDs belong to aryl propionic acid derivative?
	a) Aceclofenac	c) Diclofenac
	b) Ibuprofen	d) Phenylbutazone
XX.	Which NSAID is most co	ommonly used to close a patent ductus arteriosus in neonates?
	a) Ketorolac	c) Indomethacin
	b) Phenylbutazone	d) Mefenamic acid
		swer any seven): $(7 \times 5 = 35)$
II. A	ttempt short answers (Ans	swer any seven): (7×3-33)

1. Discuss the SAR of sympathomimmetics.

- 2. Distinguish between barbiturates and benzodiazepines citing proper examples.
- 3. Explain the catabolism of adrenaline & nor-adrenaline with chemical reactions involved.
- 4. Differentiate enzyme inducers and enzyme inhibitors. Give examples.
- 5. Explain the MOA of anticonvulsants with a suitable diagram.
- 6. Explain the mechanism behind pain in details.
- 7. Outline the stages of anesthesia.
- 8. Explain atypical antipsychotics with example.

9. Describe the synthesis of diazepam and ipratropium bromide.

III. Attempt long answers (Answer any two):

 $(2 \times 10 = 20)$

- 1. Explain SAR of morphine analogues. Give examples of natural opioid analgesics along with their
- 2. Outline the synthesis of ethosuximide and carbamazepine. Explain their MOA in relation to epilepsy.

3. Highlight the chemical classification of NSAIDs. Describe how different inflammatory mediators are produced in the body.

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