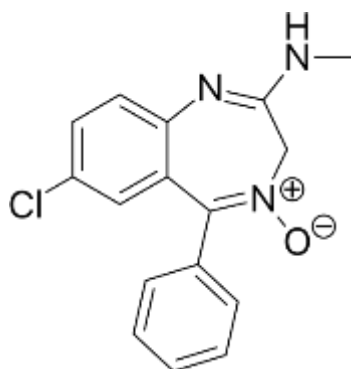


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FINAL YEAR UNIVERSITY EXAMINATION 2019-2020
Final Year B.Pharm. Semester VIII
SUBJECT-BPH_C_801_T-Pharmaceutical Chemistry III
MULTIPLE CHOICE QUESTIONS: PRACTICE QUESTION BANK

Q. 1 Which is the correct IUPAC name for the following structure?



- A] 5-chloro-2-(methylamino)-5-phenyl-3H-1,4-benzodiazepine
- B] 7-chloro-2-(methylamino)-5-pyridinyl-3H-1,4-benzodiazepine-4-oxide
- C] 7-chloro-2-(ethylamino)-5-phenyl-3H-1,5-benzodiazepine
- D] 7-chloro-2-(methylamino)-5-phenyl-3H-1,4-benzodiazepine-4-oxide

Q. 2 Which of the following is long acting sedative hypnotic?

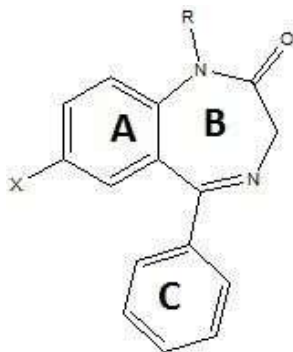
- A] Diazepam
- B] Alprazolam
- C] Temazepam
- D] Imipramine

Q. 3 Name of oxide derivative used as sedative hypnotic is

- A] Diazepam
- B] Chlordiazepoxide
- C] Nitazepam
- D] Ramelteon

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Q. 4 With respect to the following general structure which is the **correct** statement ?



- A] X must be electropositive substituent for optimum activity
- B] X must be aromatic ring for optimum activity
- C] X must be electronegative substituent for optimum activity
- D] X must be H for optimum activity

Q. 5 Which is the **incorrect** statement with respect to structure given in Q. 4

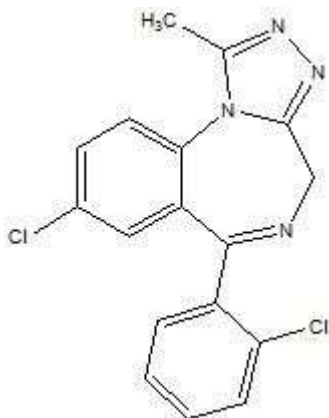
- A] Ring C is ortho substituted with electron withdrawing group for optimum activity
- B] Ring C when para substituted increases activity
- C] Ring C is diortho substituted with electron withdrawing group for optimum activity
- D] Ring C when para substituted decreases activity

Q. 6 Which of the following is GABA prodrug.

- A] tiagabine
- B] diazepam
- C] progabide
- D] mephobarbital

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Q. 7 Alprazolam (structure given below) is short acting sedative hypnotic because of



- A] Presence of 4,5 double bond in diazepine ring
- B] Presence of 1,4-diazepine ring
- C] Presence of chlorine on phenyl ring
- D] Presence of methyl group on triazole ring

Q. 8 Donepezil contains which heterocycle as scaffold?

- A] Pyridine
- B] Piperidine
- C] Piperazine
- D] Pyrazine

Q. 9 Which of the following drug is an antidote for organophosphorus poisoning?

- A] Rivastigmine
- B] Donepezil
- C] Pralidoxime chloride
- D] Tacrine

Q. 10 What is side effect of carbamazepine?

- A] EPS
- B] loss of memory
- C] aplastic anemia

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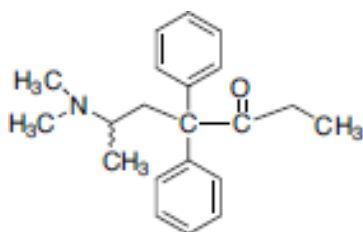
D] addiction

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Q. 11 Diazepam is metabolized to Nordazepam by _____ and _____.

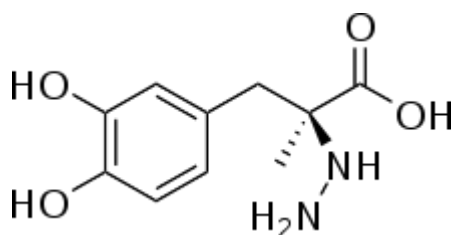
- a. CYP2C19 & CYP3A4
- b. CYP2C18 & CYP3A3
- c. CYP2C17 & CYP3A2
- d. CYP2C20 & CYP3A5

Q. 12 Identify the incorrect statement with reference to the following:



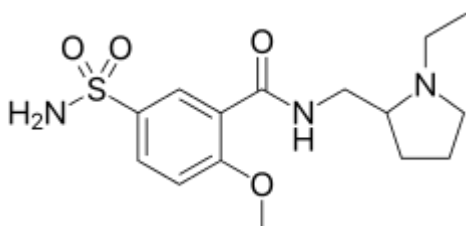
- a. Approved for analgesic therapy and for the maintenance and treatment of opioid addiction.
- b. opioid activity resides in the S-enantiomer
- c. μ -receptor agonist
- d. synthetic opioid

Q. 13 Which is the correct IUPAC name for the following structure?



- a. (S)-2-Amino-3-(3,4-dihydroxyphenyl)propanoic acid
- b. (R)-N-methyl-N-(1-phenylpropan-2-yl)prop-1-yn-3-amine
- c. (2S)-3-(3,4-dihydroxyphenyl)-2-hydrazino-2-methylpropanoic acid
- d. (2R)-3-(3,4-dihydroxyphenyl)-3-Pyridino-2-ethylbutanoic acid

Q. 14 Which is the correct IUPAC name for the following structure?



- a. 8-chloro-11-(4-methylpiperazin-1-yl)-5H-dibenzo[b,e][1,4]diazepine
- b. N-[(1-ethylpyrrolidin-2-yl)methyl]-2-methoxy-5-sulfamoylbenzamide
- c. 8-chloro-6-(4-methylpiperazin-1-yl)benzo[b][1,4]benzoxazepine

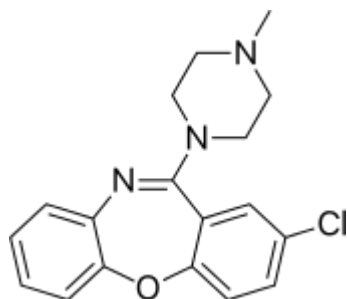
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d. 4-[4-(4-chlorophenyl)-4-hydroxypiperidin-1-yl]-1-(4-fluorophenyl)butan-1-one

Q. 15 What kind of change in the structure of direct acting sympathomimetic are responsible for making them indirectly acting compounds?

- a) Removal of 3'-OH
- b) Removal of 4'-OH
- c) Removal of 3',4'-OH
- d) Retention of 3'-OH and replacing 4'-OH with -CH₂OH

Q. 16 The given drug has affinity for which receptors?



- a) D₂ and 5HT₂ receptors
- b) D₂ and Muscarinic receptors
- c) D₁ and 5HT₂ receptors
- d) D₁ and Muscarinic receptors

Q. 17 The short elimination half-life of Zolpidem is because its aryl methyl groups is extensively_____

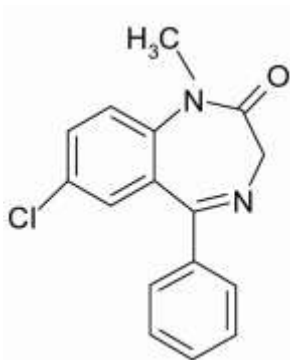
- a) α hydroxylated
- b) β hydroxylated
- c) δ hydroxylated
- d) θ hydroxylated

Q. 18 What interactions are involved in binding the phenol group to the target binding site in Morphine?

- a. Ionic interactions
- b. Hydrogen bonding interactions
- c. van der Waals binding interactions
- d. The group does not bind

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Q. 19 Identify the IUPAC nomenclature of following

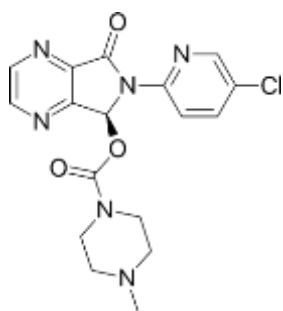


- 7-chloro-1-methyl-5-phenyl-3H-1,4-benzodiazepin-2-one
- 7-chloro-2-methylamino-5-phenyl-1,4-benzodiazepine-4-oxide
- 7-nitro-5-phenyl-1H-benzo [e] [1,4]diazepin-2(3H)-one
- 7-Chloro-1,3-dihydro-1-methyl-5-phenyl-1,4-benzodiazepin-2-one

Q. 20 Which one of the following is a Azapirones anxiolytic agent.

- Oxazepam
- Buspirone
- Clonazepam
- Eszopiclone

Q. 21 Which is the correct IUPAC name for the following structure?



- [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]pyrazin-7-yl]4-methyl piperazine-1-carboxylate.
- [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]piperazin-7-yl]4-methyl pyrazine-1-carboxylate.
- [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]piperidin-7-yl]4-methyl pyrimidin-1-carboxylate.
- [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]furan-7-yl]4-methyl piperazine-1-carboxylate.

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Q. 22 Identify selective α_1 antagonist containing quinazoline nucleus from the following agents.

- a. Tolazoline
- b. Phentolamine
- c. Phenoxybenzamine
- d. Prazosin

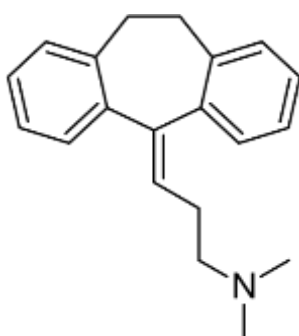
Q. 23 Mechanism of action of ramelteon is

- a. NMDA receptor antagonist
- b. Melatonin receptor antagonist
- c. GABA receptor antagonist
- d. Serotonin receptor antagonist

Q. 24 Which of the following Acetylcholine esterase inhibitor does not contain quaternary ammonium group?

- a. Physostigmine
- b. Neostigmine
- c. Pyridostigmine
- d. Edrophonium

Q. 25 Amitriptyline (structure given below) undergoes metabolism to give active metabolite by



- a. O-demethylation
- b. N-demethylation
- c. Oxidative deamination
- d. Oxidative hydroxylation

Q. 26 Which one of the following statement of trimethadione is inappropriate?

- a. Trimethadione is a prodrug
- b. Trimethadione is used in absence seizures
- c. Trimethadione belongs to imminostilbene class
- d. Trimethadione is antagonist of T type of calcium channels

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Q. 27 Which of the following is not tricyclic antidepressant?

- a. Fluoxetine
- b. Imipramine
- c. Chlorimipramine
- d. Amitriptyline

Q. 28 ----- co-administered with levodopa.

- a. Selegiline
- b. Amantadine
- c. Carbidopa
- d. Benztropine

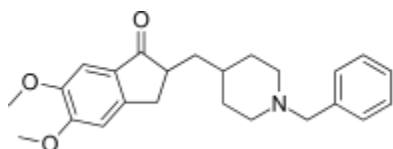
Q. 29 Identify metabolite of diazepam from the following.

- a. Chlordiazepoxide
- b. Oxazepam
- c. Nitrazepam
- d. Clonazepam

Q. 30 Which drug is COMT resistant?

- a. Isoproterenol
- b. Salbutamol
- c. Colterol
- d. Epinephrine

Q. 31 Mention therapeutic use of



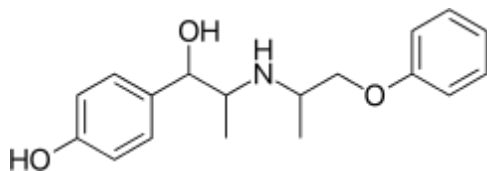
- a. Mirtazapine
- b. Insecticide
- c. Glaucoma
- d. Alzheimer disease

Q. 32 Succinylcholine needs to be administered with ----- to prevent enzymatic degradation

- a. Tubocurarine
- b. Gallamine
- c. Decamethonium
- d. Neostigmine

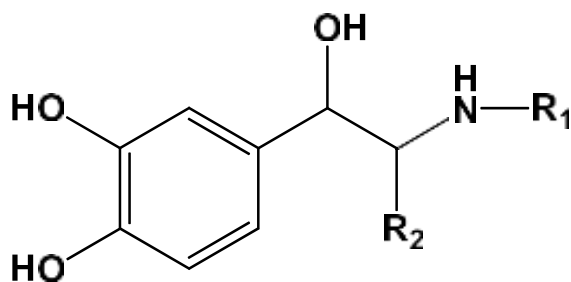
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Q. 33 Mechanism of action of



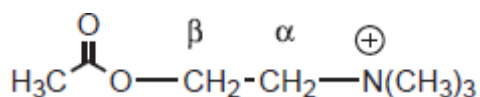
- Nonselective β agonist
- Nonselective β antagonist
- Selective β_2 agonist
- selective β_2 antagonist

Q. 34 Refer the general structural of direct acting sympathomimetic. Converting catechol to resorcinol is responsible for ----- . Select the correct answer.



- Increased α receptor selectivity
- Nonselective nature of drug
- Increases β_2 receptor selectivity and bioavailability
- Indirect activity

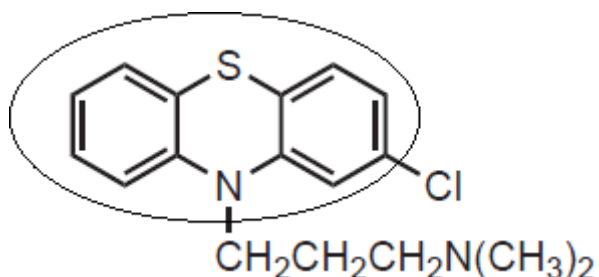
Q. 35 In the structure of Acetylcholine (shown below), substitution of α -methyl group-----.



- Increases muscarinic activity
- Increases nicotinic activity
- Increases antagonistic activity
- No change in activity

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Q. 36 Identify the encircled nucleus in the following.



- a. Dibenzazepine
- b. Benzodiazepine
- c. Phenothiazine
- d. Benzoxazine

Q. 37 Which drug is a structural hybrid of meperidine and methadone?

- a. Loperamide
- b. Diphenoxylate
- c. Fentanyl
- d. Pheneridine

Q. 38 Which one of the following drug shows minimal EPS

- a. Pimozide
- b. Clozapine
- c. Droperidol
- d. Chlorpromazine

Q. 39 Codeine is -----.

- a. Methylated analog of morphine
- b. Acetylated analog of morphine
- c. Antagonist of morphine
- d. Metabolite of morphine

Q. 40 The β blocker which contain aryethanolamine scaffold

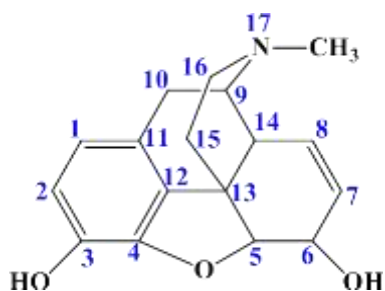
- a. Esmolol
- b. Metoprolol
- c. Sotalol
- d. Timolol

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Q. 41 To which chemical class does the anticholinergic drug dicyclomine belong?

- a. Aminoalcohol
- b. Aminoamides
- c. Amino alcohol esters
- d. Amino alcohol ethers

Q. 42 The given molecule has how many chiral centers?



- a. 3
- b. 4
- c. 5
- d. 6

Q. 43 Which structural feature of morphine is missing in levorphanol?

- a. Phenyl ring
- b. Epoxide bridge
- c. Piperidine ring
- d. O3- OH group

Q, 44 Find the wrong pair

- a. Prazosin : α_1 blocker
- b. Guanabenz: α_2 agonist
- c. Phenylephrine: α_1 agonist
- d. Phenylephrine: α_2 antagonist

Q.45 Find the odd one out

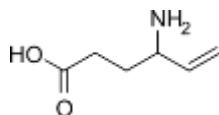
- a. Gallamine
- b. Succinylcholine
- c. Decamethonium
- d. Procyclidine

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Q.46 Which of the following benzodiazepine is suitable for treatment in children & old age patients?

- a. Diazepam
- b. Oxazepam
- c. Temazepam
- d. Nitrazepam

Q. 47 What is the mechanism of action of



- a. Inhibit reuptake of GABA
- b. Inhibit GABA transaminase
- c. Inhibit glutamate decarboxylase
- d. Blocks GABA receptor

Q. 48 Modification of nonrigid opioid like ---- leads to butyrophenone whereas butyrophenones are modified to----- type of antipsychotic.

Complete the statement by selecting the correct pair from the following.

- a. Meperidine, Diphenylbutylpiperidine
- b. Methadone, Diphenylbutylpiperidine
- c. Meperidine, Benzamide
- d. Methadone: Benzamide

Q. 49 Which conformer of acetylcholine binds with the receptor?

- a. Synperiplanar
- b. Antiperiplanar
- c. Synclinal
- d. Anticlinal