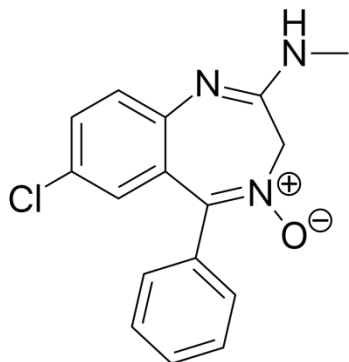


FINAL YEAR PHARM. SEMESTER VIII
SUBJECT-BPH_C_801_T-Pharmaceutical Chemistry III
MULTIPLE CHOICE QUESTIONS: PRACTICE QUESTION BANK

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

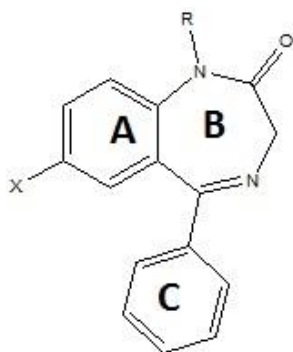
Q. 2 Which of the following is long acting sedative hypnotic?

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

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

- A. Diazepam
- B. Chlordiazepoxide
- C. Nitrazepam
- D. Ramelteon

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

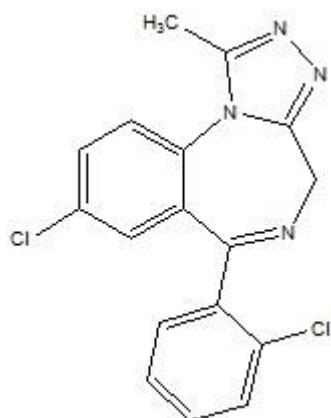


- A. X must be electropositive substituent for optimum activity
- B. X must be aromatic ring for optimum activity
- C. X must be electronegative substituent for optimum activity
- D. X must be H for optimum activity

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 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. 7 Which Acetylcholine esterase inhibitor is used for treatment of Alzheimer disease?

- A. Tacrine
- B. Physostigmine
- C. Neostigmine
- D. Pyridostigmine

Q. 8 Nicotine receptor is a type of which receptor?

- A. GPCR
- B. Ion channel receptor
- C. Kinase receptor
- D. Nuclear receptor

Q. 9 Donepezil contains which heterocycle as scaffold?

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

Q. 10 Which of the following drug is an antidote for organophosphorus poisoning?

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

Q. 11 What is side effect of carbamazepine?

- A. EPS
- B. loss of memory

- C. aplastic anemia
- D. addiction

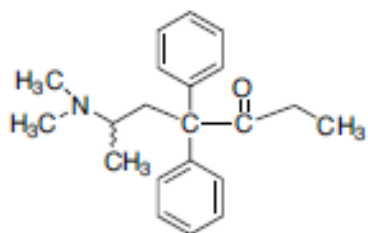
Q. 12 Which of the following pair of drugs is used to treat Parkinson's disease?

- A. Carbidopa-Levodopa
- B. Selegillin Amantadine
- C. Carbidopa-Amantadine
- D. Sulfinpyrazone-Probenecid

Q. 13 Diazepam is metabolized to Nordazepam by _____ and _____.

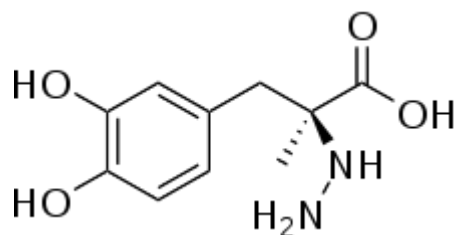
- A. CYP2C19 & CYP3A4
- B. CYP2C18 & CYP3A3
- C. CYP2C17 & CYP3A2
- D. CYP2C20 & CYP3A5

Q. 14 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. 15 Which is the correct IUPAC name for the following structure?



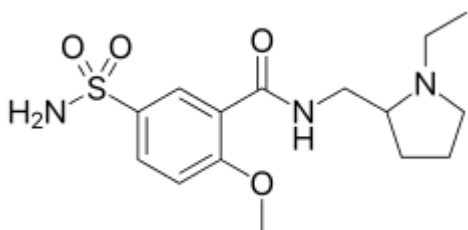
- A. (S)-2-Amino-3-(3,4-dihydroxyphenyl) propanoic acid
- B. (R)-N-methyl-N-(1-phenylpropan-2-yl) prop-1-yn-3-amine

- C. (2*S*)-3-(3,4-dihydroxyphenyl)-2-hydrazino-2-methylpropanoic acid
- D. (2*R*)-3-(3,4-dihydroxyphenyl)-3-Pyridino-2-ethylbutanoic acid

Q. 16 The effect of larger substitution on side chain N in case of phenyl ethanolamine is

- A. Increase in β_2 receptor selectivity
- B. Increase in α receptor activity
- C. Increase in nonselectivity towards α , β receptors
- D. Loss of direct sympathomimetic activity

Q. 17 Which is the correct IUPAC name for the following structure?



- A. 8-chloro-11-(4-methylpiperazin-1-yl)-5*H*-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
- D. 4-[4-(4-chlorophenyl)-4-hydroxypiperidin-1-yl]-1-(4-fluorophenyl) butan-1-one

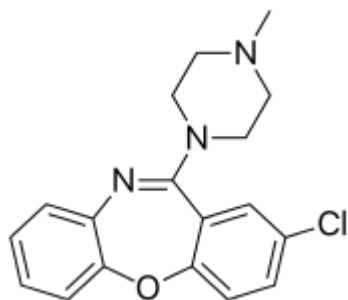
Q. 18 What kind of change in the structure of direct acting sympathomimetic are responsible for making them indirectly acting compounds?

- 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. 19 Because diazepam clearance is decreased in the elderly and in patients with hepatic insufficiency, a dosage _____ may be warranted.

- A. Enhancement
- B. Reduction
- C. No effect
- D. Remain Constant

Q. 20 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. 21 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. 22 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

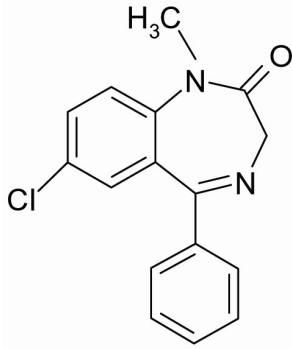
Q. 23 3-(dimethylamino)phenol and dimethylcarbamic chloride are the starting materials for the synthesis of

- A. Neostigmine
- B. Physostigmine
- C. Pyridostigmine
- D. Rivastigmine

Q. 24 Which of the following are semi-synthetic opiates?

- A. Codeine
- B. Oxycodone
- C. Fentanyl
- D. Endomorphins

Q. 25 Identify the IUPAC nomenclature of following



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

Q. 26 Which one of the following is a Selective serotonin inhibitor?

- A. Imipramine
- B. Doxepine
- C. Amoxapine
- D. Escitaprolam

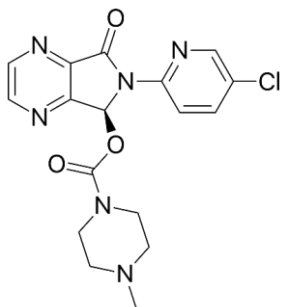
Q. 27 Which one of the following is a Azapirones anxiolytic agent.

- A. Oxazepam
- B. Buspirone
- C. Clonazepam
- D. Eszopiclone

Q. 28 Which of the following is aminoalcohol type of an anticholinergic?

- A. Procyclidine
- B. Benztropine
- C. Isopropamide
- D. Tropicamide

Q. 29 Which is the correct IUPAC name for the following structure?

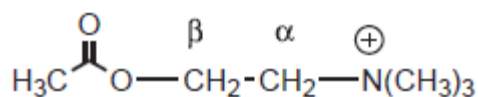


- A. [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]pyrazin-7-yl]4-methyl piperazine-1-carboxylate.
- B. [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]piperazin-7-yl]4-methyl pyrazine-1-carboxylate.
- C. [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]piperidin-7-yl]4-methyl pyrimidin-1-carboxylate.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

Q. 30 Primary use of fluoxetine is

- A. Antidepressant
- B. Anxiolytics
- C. Antipsychotics
- D. Sedative Hypnotic

Q. 31 In the structure of Acetylcholine (shown below), substitution of α -methyl group-----.



- A. Increases muscarinic activity
- B. Increases nicotinic activity
- C. Increases antagonistic activity
- D. No change in activity

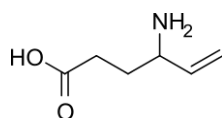
Q. 32 Which feature of acetylcholine interacts with the binding site of cholinergic receptors by hydrogen bonding?

- A. The acyl methyl group
- B. The ester
- C. The quaternary nitrogen
- D. All three N-methyl groups

Q. 33 Which conformer of acetylcholine binds with the receptor

- A. Synperiplanar
- B. Antiperiplanar
- C. Synclinal
- D. Anticlinal

Q. 34 What is the mechanism of action of?



- A. Inhibit reuptake of GABA Antiperiplanar
- B. Inhibit GABA transaminase
- C. Inhibit glutamate decarboxylase
- D. Blocks GABA receptor

Q. 35 Find out odd one out?

- A. Gallamine
- B. Succinylcholine
- C. Decamethonium
- D. Procyclidine

Q. 36 Find wrong pair?

- A. Prazosin- α 1 blocker
- B. Guanabenz- α 2 agonist
- C. Phenylephrine- α 1 agonist
- D. Phenylephrine - α 2 agonist

Q. 37 To which chemical class does the anticholinergic drug dicyclomine belong?

- A. Aminoalcohol
- B. Aminoamides
- C. Amino alcohol ether
- D. Amino alcohol ester

Q. 38 Which of the following not belong to tricyclic antidepressant?

- A. Fluoxetine
- B. Imipramine
- C. Chlorimipramine
- D. Amitriptyline

Q. 39 Identify metabolite of Diazepam from following?

- A. Chlordiazepoxide
- B. Oxazepam
- C. Nitrazepam
- D. Clonazepam

Q. 40. Which of the following benzodiazepine is suitable for treatment in children & old age patients?

- A. Diazepam
- B. Oxazepam
- C. Temazepam
- D. Nitrazepam

Q. 41. Which structural feature of morphine is missing in levorphanol?

- A. Phenyl ring
- B. Epoxide bridge
- C. Piperidine ring
- D. 3-OH group

Q. 42. Codeine is -----?

- A. Methylated analog of morphine
- B. Acetylated analog of morphine
- C. Antagonist of morphine
- D. Metabolite of morphine

ANSWERS

1. D 2. A 3. B 4. C 5. B 6. D 7. A 8. B 9. B 10. C 11. C 12. A 13. A 14. B 15. C 16. A
17. B 18. C 19. B 20. A 21. A 22. B 23. A 24. B 25. A 26. D 27. B 28. A 29. A 30. A
31. B 32. B 33. D 34. B 35. D 36. D 37. D 38. A 39. B 40. B 41. B 42. A

