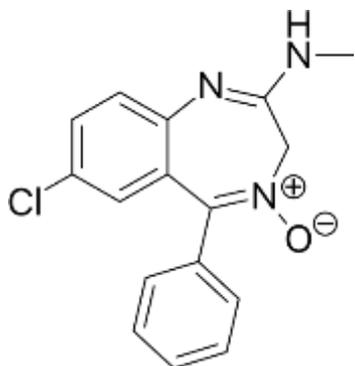


Pharmaceutical Chemistry IV Sem VIII (CBGS)
MULTIPLE CHOICE QUESTIONS: PRACTICE QUESTION BANK

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

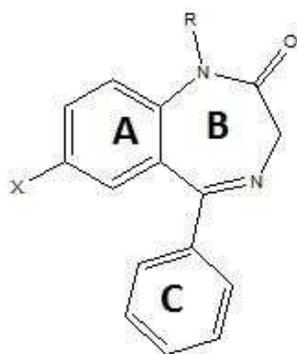
Q. 2 Which of the following is long acting sedative hypnotic?

- 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

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

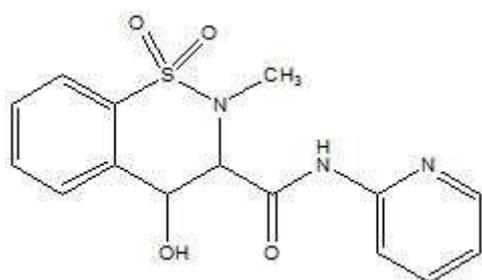


- A] X must be electropositive substituent for optimum activity
- B] X must be aromatic ring for optimum activity
- C] X must be electronegative substituent for optimum activity
- D] X must be H for optimum activity

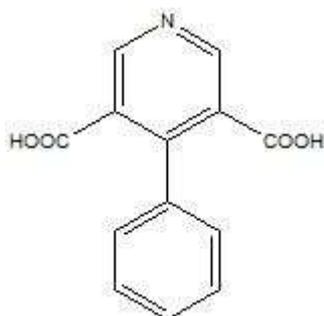
Q. 5 Which is the **incorrect** statement with respect to structure given in Q. 4

- 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

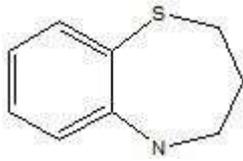
Q. 6 What is the starting material for synthesis of Piroxicam (structure given below)



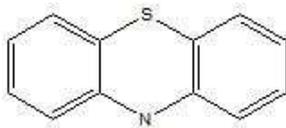
A]



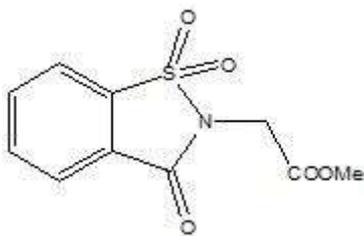
B]



C]



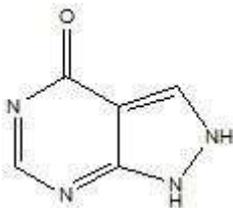
D]



Q. 7 Which one of the following is Cytokine inhibitor?

- A] Abatacept
- B] Fluoxetine
- C] Propranolol
- D] Aldosterone

Q. 8 Write the name and use for the following drug.



- A] Allopurinol, treatment of Gout
- B] Colterol, Adrenergic agent
- C] Atropine, Cholinergic antagonist
- D] Indomethacin, NSAID

Q. 9 Which of the following approach will lead to active metabolite for sulfinpyrazone?

- A] N-dearylation
- B] Sulfide formation
- C] para hydroxylation of phenyl ring
- D] S reduction

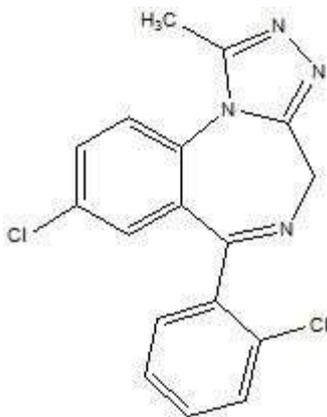
Q. 10 Anakinra is

- A] costimulation modulator
- B] anti-TNF alpha antibody
- C] TNF-alpha blocker
- D] interleukin receptor antagonist

Q. 11 Which of the following is GABA prodrug.

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

Q. 12 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. 13 Which Acetylcholine esterase inhibitor is used for treatment of Alzheimer disease?

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

Q. 14 Nicotine receptor is a type of which receptor?

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

Q. 15 Donepezil contains which heterocycle as scaffold?

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

Q. 16 Which of the following drug is an antidote for organophosphorus poisoning?

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

Q. 17 Which of the following drug is COX-II inhibitor?

- A] Valdecoxib
- B] Piroxicam
- C] Nabumetone
- D] Mefenemic acid

Q. 18 Which of the following NSAID is a prodrug?

- A] Ibuprofen

- B] Indometahcin
- C]Diclofenac
- D]Sulindac

Q. 19 Drug increasing uric acid excretion is

- A] Colchicine
- B] Probenecid
- C] sulfinpyrazone
- D] allopurinol

Q. 20 What is side effect of carbamazepine?

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

Q. 21 Which of the following pair of drugs is used to treat Parkinson's disease?

- A] Carbidopa-Levodopa
- B] Selegillin Amantidine
- C] Carbidopa-Amantidine
- D]Sulfinpyrazone-Probenecid

Q. 22 Chemical class of Ibuprofen is,

- A] Aryl acetic acid
- B] Aryl propanoic acid
- C] Indole acetic acid
- D]Anthranilic acid

Q. 23 Which one of the following is example of mineralo-corticosteroid

- A] betamethasone
- B] prednisone
- C] Aldosterone

D] triamcinolone

Q. 24 Diethyl stilbestrol is active in which of the following form?

A] cis form

B] trans form

C] meso compound

D] R form

Q. 25 Which of the following is not an example of progestin?

A] Tamoxifen

B] Megestrol

C] Norethindrone

D] Medroxyprogesterone

Q. 26 Identify the drug with the following chemical name :

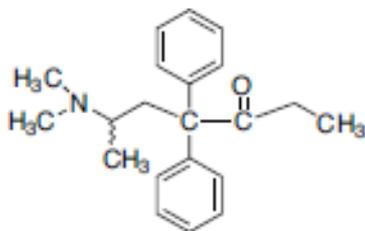
17 α -pregna-2,4-dien-20-yno-[2,3-*d*]isoxazol-17-ol

- a. Stanazolol
- b. Nandrolone
- c. Danazole
- d. Oxandrolone

Q. 27 Diazepam is metabolized to Nordazepam by _____ and _____.

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

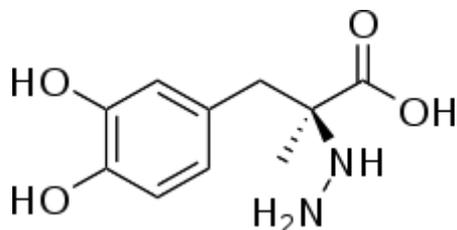
Q. 28 Identify the incorrect statement with reference to the following:



- 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. 29 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

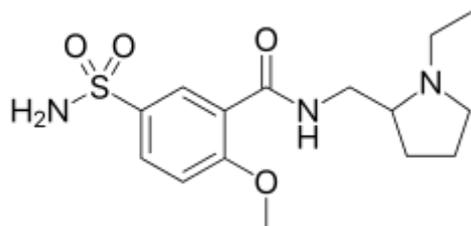
Q. 30 The effect of larger substitution on side chain N in case of phenylethanolamine is

- 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. 31 α -CH₃ substituent present in the profens,

- a. decreases cyclooxygenase inhibitory activity and induces toxicity of the profens.
- b. decreases cyclooxygenase inhibitory activity and decreases toxicity of the profens.
- c. increases cyclooxygenase inhibitory activity and increases toxicity of the profens.
- d. increases cyclooxygenase inhibitory activity and reduces toxicity of the profens.

Q. 32 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
- d. 4-[4-(4-chlorophenyl)-4-hydroxypiperidin-1-yl]-1-(4-fluorophenyl)butan-1-one

Q. 33 If additional unsaturation is introduced in the Ring A in Glucocorticoids, it results in

- a. Increase in Glucocorticoid activity

- b. Changes the conformation of A ring
- c. Enhance anti-inflammatory effect
- d. Decreases Salt retaining activity

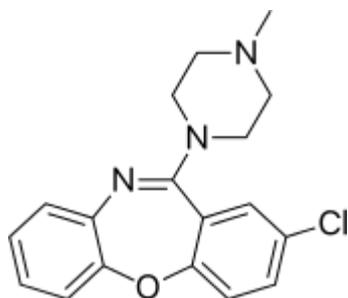
Q. 34 What kind of change in the structure of direct acting sympathomimetic are responsible for making them indirectly acting compounds?

- 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. 35 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. 36 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. 37 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. 38 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. 39 Major pathway of metabolism of NSAID's by

- a. Conjugation
- b. Hydrolysis
- c. Oxidation
- d. Reduction

Q. 40 3-(dimethylamino)phenol and dimethylcarbamic chloride are the starting materials for the synthesis of

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

Q. 41 Which of the following are semi-synthetic opiates?

- a. Codeine
- b. Oxycodone
- c. Fentanyl
- d. Endomorphins

Q. 42 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. 43 Which one of the following is a Selective serotonin inhibitor?

- a. Imipramine
- b. Doxepine
- c. Amoxapine
- d. Escitaprolam

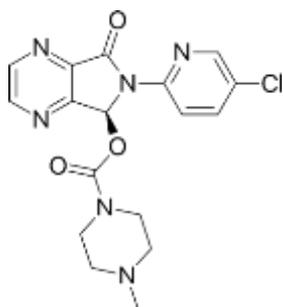
Q. 44 Which one of the following is a Azapirone anxiolytic agent.

- a. Oxazepam
- b. Buspirone
- c. Clonazepam
- d. Eszopiclone

Q. 45 Which of the following is aminoalcohol type of an anticholinergic?

- a) Procyclidine b) Benztropine c) Isopropamide d) Tropicamide

Q. 46 Which is the correct IUPAC name for the following structure?



- a. [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]pyridin-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 pyridine-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. 47 Primary use of fluoxetine is

- a. Antidepressant
- b. Anxiolytics
- c. Antipsychotics
- d. Sedative Hypnotic

Q. 48 Which of the following is γ -vinyl GABA

- a. Phenytoin
- b. Vigabatrine
- c. Valproic acid
- d. Gabapentine

Q. 49 Naproxen is a derivative of _____

- a. Arylpropionic acid

- b. Arylethanoic acid
- c. Arylpropionic ester
- d. Arylpropionic ether

Q. 50 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