

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

SET-I

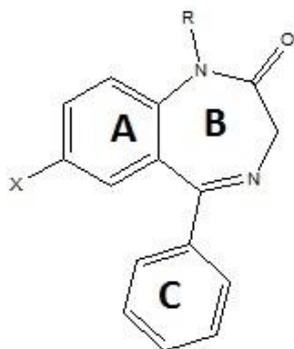
Q. 1 Which of the following is long acting sedative hypnotic?

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

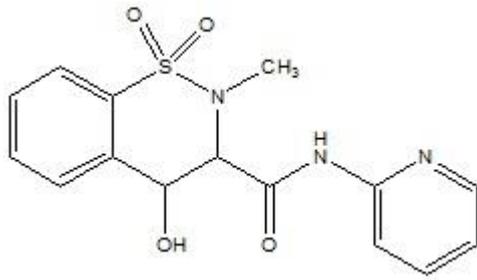
Q. 2 Name of oxide derivative used as sedative hypnotic is

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

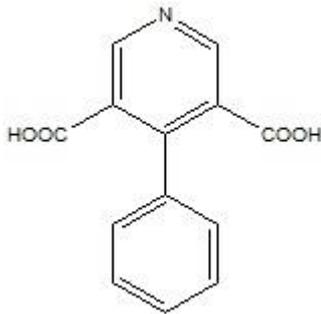
Q. 3 Which is the **incorrect** statement with respect to structure given



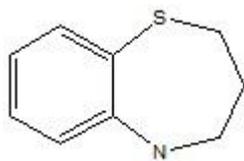
- A] Ring C is ortho substituted with electron withdrawing group for optimum activity
 - B] Ring C when para substituted increases activity
 - C] Ring C is diortho substituted with electron withdrawing group for optimum activity
 - D] Ring C when para substituted decreases activity
- Q. 4 What is the starting material for synthesis of Piroxicam (structure given below)



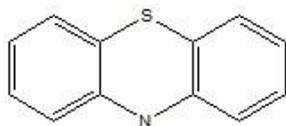
A]



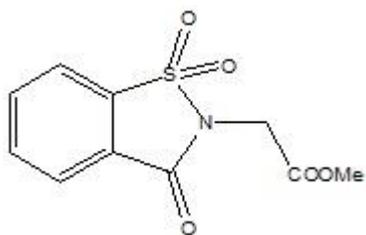
B]



C]



D]



Q. 5 Which one of the following is Cytokine inhibitor?

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

D]Aldosterone

Q. 6 Anakinra is

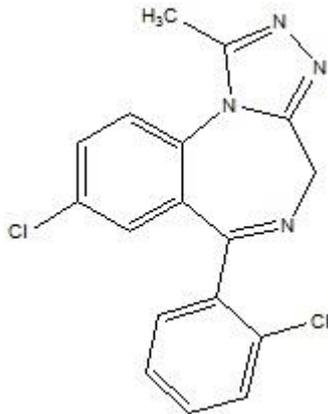
A]costimulation modulator

B] anti-TNF alpha antibody

C] TNF-alpha blocker

D]interleukin receptor antagonist

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 Diethyl stilbestrol is active in which of the following form?

A]cis form

B] trans form

C]meso compound

D] R form

Q. 9 Which of the following is not an example of progestin?

A] Tamoxifen

B]Megestrol

C] Norethindrone

D]Medroxyprogesterone

Q. 10 Identify the drug with the following chemical name :

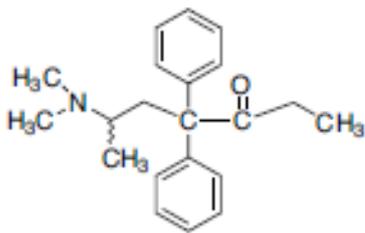
17 α -pregna-2,4-dien-20-yno-[2,3-*d*]isoxazol-17-ol

- Stanazolol
- Nandrolone
- Danazole
- Oxandrolone

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

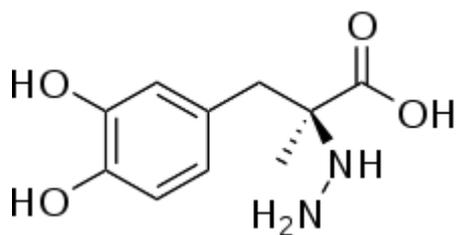
- CYP2C19 & CYP3A4
- CYP2C18 & CYP3A3
- CYP2C17 & CYP3A2
- CYP2C20 & CYP3A5

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



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

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

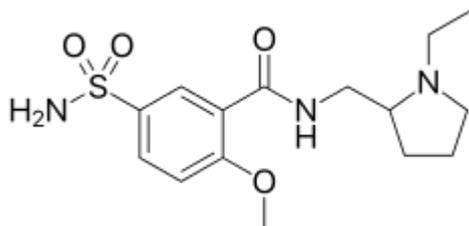


- (*S*)-2-Amino-3-(3,4-dihydroxyphenyl)propanoic acid
- (*R*)-*N*-methyl-*N*-(1-phenylpropan-2-yl)prop-1-yn-3-amine
- (2*S*)-3-(3,4-dihydroxyphenyl)-2-hydrazino-2-methylpropanoic acid
- (2*R*)-3-(3,4-dihydroxyphenyl)-3-Pyridino-2-ethylbutanoic acid

Q. 14 α -CH₃ substituent present in the profens,

- decreases cyclooxygenase inhibitory activity and induces toxicity of the profens.
- decreases cyclooxygenase inhibitory activity and decreases toxicity of the profens.
- increases cyclooxygenase inhibitory activity and increases toxicity of the profens.
- increases cyclooxygenase inhibitory activity and reduces toxicity of the profens.

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



- 8-chloro-11-(4-methylpiperazin-1-yl)-5H-dibenzo[b,e][1,4]diazepine
- N*-[(1-ethylpyrrolidin-2-yl)methyl]-2-methoxy-5-sulfamoylbenzamide
- 8-chloro-6-(4-methylpiperazin-1-yl)benzo[b][1,4]benzoxazepine
- 4-[4-(4-chlorophenyl)-4-hydroxypiperidin-1-yl]-1-(4-fluorophenyl)butan-1-one

Q. 16 What kind of change in the structure of direct acting sympathomimetic are responsible for making them indirectly acting compounds?

- Removal of 3'-OH
- Removal of 4'-OH
- Removal of 3',4'-OH
- Retention of 3'-OH and replacing 4'-OH with -CH₂OH

Q. 17 Because diazepam clearance is decreased in the elderly and in patients with hepatic insufficiency, a dosage _____ may be warranted.

- Enhancement
- Reduction
- No effect
- Remain Constant

Q. 18 The short elimination half-life of Zolpidem is because its aryl methyl groups is extensively _____

- α hydroxylated
- β hydroxylated
- δ hydroxylated
- θ hydroxylated

Q. 19 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. 20 Major pathway of metabolism of NSAID's by

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

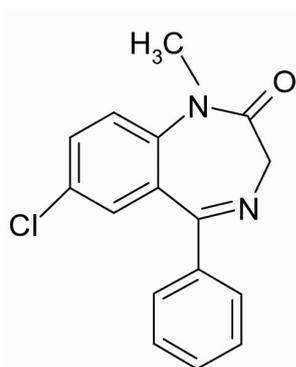
Q. 21 3-(dimethylamino)phenol and dimethylcarbamic chloride are the starting materials for the synthesis of

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

Q. 22 Which of the following are semi-synthetic opiates?

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

Q. 23 Identify the IUPAC nomenclature of following

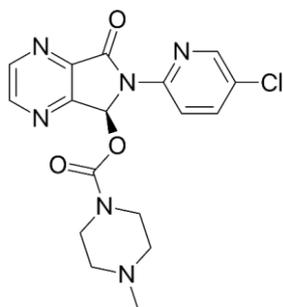


- a. 7-chloro-1-methyl-5-phenyl-3H-1,4-benzodiazepin-2-one
- b. 7-chloro-2-methylamino-5-phenyl-1,4-benzodiazepine-4-oxide
- c. 7-nitro-5-phenyl-1H-benzo [e] [1,4]diazepin-2(3H)-one
- d. 7-Chloro-1,3-dihydro-1-methyl-5-phenyl-1,4-benzodiazepin-2-one

Q. 24 Which of the following is aminoalcohol type of an anticholinergic?

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

Q. 25 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-methylpyrazine-1-carboxylate.
- [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]piperidin-7-yl]4-methylpyrimidin-1-carboxylate.
- [(7S)-6-(5-chloropyridin-2-yl)-5-oxo-7H-pyrrolo[3,4-b]furan-7-yl]4-methyl piperazine-1-carboxylate.

Q. 26 Naproxen is a derivative of _____

- Arylpropionic acid
- Arylethanoic acid
- Arylpropionic ester
- Arylpropionic ether

Q. 27 Which feature of acetylcholine interacts with the binding site of cholinergic receptors by hydrogen bonding?

- The acyl methyl group
- The ester
- The quaternary nitrogen
- All three N-methyl groups

SET-II

1) Identify selective α_1 antagonist containing quinazoline nucleus from the following agents.

a) Tolazoline b) Phentolamine c) Phenoxybenzamine d) Prazosin

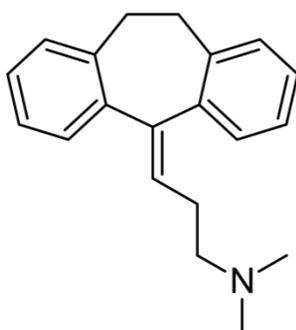
2) Mechanism of action of ramelteon is

a) NMDA receptor antagonist b) Melatonin receptor antagonist
c) GABA receptor antagonist d) Serotonin receptor antagonist

3) Which of the following Acetylcholine esterase inhibitor does not contain quaternary ammonium group?

a) Physostigmine b) Neostigmine c) Pyridostigmine d) Edrophonium

4) Amitriptyline (structure given below) undergoes metabolism to give active metabolite by

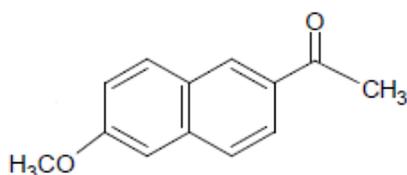


a) O-demethylation b) N-demethylation c) Oxidative deamination d) Oxidative hydroxylation

5) The enzyme which degrades dopamine is

a) COMT b) DOPA decarboxylase c) Aldehyde reductase d) Cyclooxygenase

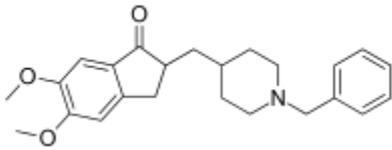
6) Identify the Non-Steroidal Anti-inflammatory drug that can be synthesized using following reagent.



a) Diclofenac b) Naproxen c) Piroxicam d) Nimesulide

7) Which one of the following statement of trimethadione is inappropriate?

a) Trimethadione is a prodrug



a) Myasthenia Gravis b) Insecticide c) Glaucoma d) Alzheimer disease

19) Which of the following statement is not true with respect to Imipramine?

- a) It is MAO inhibitor
- b) It gets metabolized by N-dealkylation
- c) It is norepinephrine and serotonin reuptake inhibitor
- d) Dibenzazepine is basic scaffold present

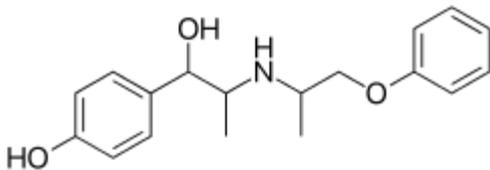
20) Succinylcholine needs to be administered with ----- to prevent enzymatic degradation

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

21) Why 17 α substituent in androstane is important?

- a) Increase potency
- b) Increase anabolic activity
- c) Provide oral bioavailability
- d) Increase progestational activity

22) Mechanism of action of



- a) Nonselective β agonist
- b) Nonselective β antagonist
- c) Selective β_2 agonist
- d) selective β_2 antagonist

23) The IUPAC name of Buspirone is

- a) 8-[4-(4-pyrimidin-2-yl piperazin-1-yl)butyl]-8-azaspiro [4.5] decane-7,9-dione
- b) 8-[4-(4-pyrimidin-2-yl piperazin-1-yl)propyl]-8-azaspiro [4.5] decane-7,9-dione
- c) 8-[4-(4-pyridin-2-yl piperazin-1-yl)butyl]-8-azaspiro [4.5] decane-7,9-dione
- d) 8-[4-(4-pyrimidin-2-yl piperazin-1-yl)butyl]-8-azaspiro [4.5] decane-6,8-dione

24) Which one of the following anti epileptic drug do not contain ureide in its structure

- a) Phenytoin
- b) Trimethadione
- c) Ethotoin
- d) Lamotrigine

30) Which one of the following drug shows minimal EPS

a) Pimozide b) Clozapine c) Droperidol d) Chlorpromazine

31) Codeine is-----.

a) Methylated analog of morphine b) Acetylated analog of morphine
c) Antagonist of morphine d) Metabolite of morphine

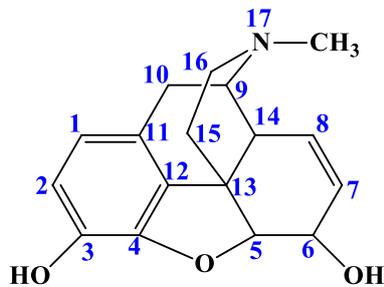
32) The β blocker which contain aryethanolamine scaffold

a) Esmolol b) Metoprolol c) Sotalol d) Timolol

33) To which chemical class does the anticholinergic drug dicyclomine belong?

a) Aminoalcohol b) Aminoamides c) Amino alcohol esters d) Amino alcohol ethers

34) The given molecule has how many chiral centers?

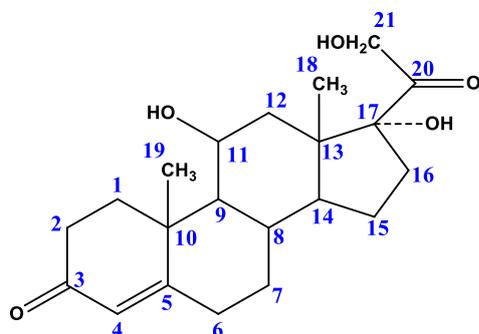


a) 3 b) 4 c) 5 d) 6

35) Which substituent in celecoxib is responsible precluding binding with COX I enzyme?

a) Sulfamoyl b) Phenyl c) Methyl d) Trifluoromethyl

36) Read the statements given below related to SAR of glucocorticoids and choose the correct option given below.



A: Introduction of 9 α -Fluorodecreases salt retention property

B: Methyl group at 16th position can be either α or β for better glucocorticoidal activity

a) A correct

b) B correct

c) A and B both correct

d) A and B both wrong

37) Which structural feature of morphine is missing in levorphanol?

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

38) In case of Phenothiazine –Cl group at 2nd position and 3 C chain separating N10 and amino nitrogen is essential because -----.

a) It is important for lipophilicity

b) It gives dopamine like arrangement

c) To maintain potency

d) It increases CNS penetration.

39) Center of acidity in case of Piroxicam can be represented by---

a) -SO₂NCH₃ group b) Enolic acid c) Pyridine ring d) –OH group

40) Identify the incorrect pair from the following.

a) Fluoxetine: Phenoxyphenylpropylamine

b) Vigabatrine: γ -Vinyl GABA

c) Bethanechol: Carbamate ester

d) Ritodrine: Catechol hydroxyl

41) Which one of the following group can be tolerated in 7th position of benzodiazepine ring

a) -NH₂ b) -OH c) -NO₂ d) -CH₃

42) Find the wrong pair

a) Prazosin : α_1 blocker

b) Guanabenz: α_2 agonist

c) Phenylephrine: α_1 agonist

d) Phenylephrine: α_2 antagonist

43) Identify the correct statement related to benzomorphan.

a) They are obtained by removal of epoxide bridge of morphine.

b) They do not contain B, C, E ring of morphine

c) Cis and Trans isomer have unequal analgesic activity

d) They are obtained by removal of C ring of morphine

44) Find the odd one out

a) Gallamine

b) Succinylcholine

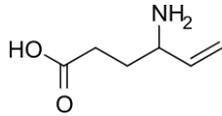
c) Decamethonium

d) Procyclidine

45) Which of the following benzodiazepine is suitable for treatment in children & old age patients?

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

46) What is the mechanism of action of



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

47) 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

48) Which conformer of acetylcholine binds with the receptor?

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