
**B. Pharmacy 4th
Semester
Question Paper
2018-2019**

BP-401

Library 3

Even Semester Examination 2018-19

B.PHARMA (SEMESTER-IV)

Pharmaceutical Organic Chemistry-III

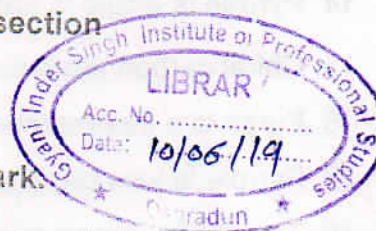
Time: 03:00 Hour

Max Marks: 75

Attempt all sections as per instructions given in each section

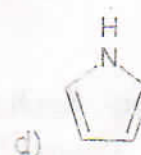
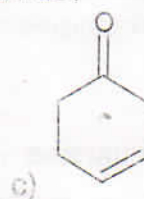
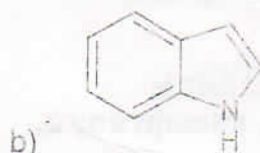
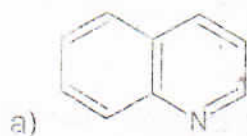
SECTION A

Note: All are compulsory, each question carry one mark.



[20×1]

- Which of the following compounds will exhibit cis-trans isomerism?
a) 2-butene c) 2-butanol
b) 2-butyne d) butanal
- Stereoisomerism are
a) Constitutional isomer b) different compounds with the same connectivity
c) conformational isomers (d) identical isomers
- Compounds with same molecular formula but different structural formulas are called
a) alkoxides b) iso compounds
c) isomers c) ortho compounds
- A molecule is said to be chiral
a) if it contain the plane of symmetry b) if it contains centre of symmetry
c) if it cannot superimposed on its mirror image d) if it superimposed on its mirror images
- Which of the following compounds show geometrical isomerism
a) $\text{CH}_2=\text{CHCl}_2$ b) $\text{ClCH}=\text{CHBr}$
c) $\text{CH}_2=\text{CHCl}$ d) $\text{Cl}_2\text{C}=\text{CBr}_2$
- Which of the following is not a heterocyclic compounds?



- The N atom in pyrrole is
a) sp^3 hybridized b) sp^2 hybridized c) sp hybridized d) cannot be predicted
- furan react with ammonia in the presence of alumina at 400°C
a) pyrrole b) fufural c) pyridine d) Furoic acid

- 9) Pyridine react with HCl to form
 a) Pyridinium hydrochloride b) 2-Chloropyridine c) 3-chloropyridine d) none of these
10. Pyridine has a delocalised π molecular orbital containing
 a) 4 electrons b) 6 electrons c) 8 electrons d) 12 electrons
11. Isomers which possess the same molecular formula and structural formula but differ in the arrangement of atoms or groups in space is known as
12. Cis – trans isomerism only occurs in double-bonded compound. True / False
13. A compound can exist as a maximum of two structural isomers. True / False
14. Pyrrole is acidic in nature. True / False
15. Chiral carbon atom has four different groups or atom attached to it. True / False
16. Furan is a five-membered ring compound. True / False
17. Pyrrole is less basic than pyridine. True / False
18. The condensation of hydrazine with a ketone or aldehyde takes place in Wolf-Kishner reduction. True / False
19. Reaction of aldehyde or ketone with ylide of phosphonium salt is called Wittig reaction. True / False
20. Zn/Hg & HCl is used as catalyst in Clemmensen reduction. True / False

SECTION B

Note: Each question carries 5 marks, attempt any 7

[7×5]

1. What are the heterocyclic compounds? Discuss the molecular orbital structure of pyridine.
2. Explain why pyrrole is aromatic in nature.
3. Explain the Wolf Kishner reduction
4. Explain the electrophilic substitution of pyrrole.
5. What do you understand by Cis –Trans and E.Z notations?
6. Write a note on geometrical isomerism.
7. What is specific rotation. Explain it.
8. Write a note on optical isomerism of Lactic acid
9. Write a note on enantiomers and racemisation

SECTION C

Note: Each question carries 10 marks, attempt any 2.

[2×10]

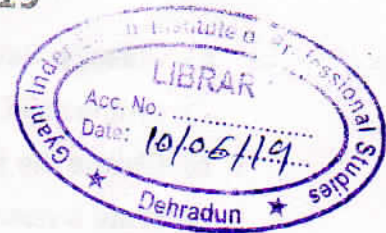
1. Write the Conformational isomerism in Ethane, N-butane and cyclohexane.
2. Write a note on stereospecific and stereoselective synthesis.
3. What is optical isomerism? Explain the optical activity with examples.
4. Discuss the synthesis, chemical reaction and use of Pyrimidine and purine.

BP-402T

Even Semester Examination 2018-19

B.PHARMA (SEMESTER-IV)

Medicinal Chemistry-I



Time: 3.00 Hours

Max. Marks: 75

Note: Attempt all questions.

SECTION-A

1. All given questions are compulsory.

[20×1]

- Sedatives are used to help with anxiety. (True /False)
- With the exception of chlordiazepoxide, all benzodiazepine have _____ (pam or lam) in the end.
- Noradrenaline is a adrenergic neurotransmitters. (True/False)
- Acetylcholine is the antagonist of cholinergic receptor. (True /False)
- Benzodiazepine do anaesthesia? (True/False)
- Ibuprofen belong to the class NSAID. (Yes/No)
- Aspirin is ainhibitor
- Atropine isantagonist.
- Dicyclomine is a drug of choice for.....
- Neostigmine is a
- Propranolol is beta adrenergic blocker? (True/False).
- Phase II reaction in metabolism is also known asreaction.
- Pralidoxime chloride is choline esterase reactivator? (True/False)
- Phenytoin is belong to the class oxazolidine of anticonvulsant drugs. (True/False)
- Nalorphine is a narcotic agonist. (True/False)
- Phenacemide is belong to the class.....of anticonvulsant agents.
- Ketorlac is an anti-inflammatory drug. (True/False)
- The sulphuride is the example ofdrug.
- Thiopental sodium is a long acting barbiturate. (True/False)
- Ketamine is a dissociative anaesthetics. (True/False)

SECTION B

2. Attempt any seven parts of the following:

[7 × 5]

- a) Classify Sedatives-hypnotics alongwith their structures and enumerate the synthesis of barbital.
- b) Outline the synthesis, MOA and uses of ibuprofen and diazepam.
- c) Write a note on i) applications of bioisosterism ii) cholinesterase inhibitors.
- d) Give SAR of parasympathomimetic agents alongwith synthesis of procyclidine hydrochloride.
- e) Write down the synthesis and uses of fentanyl citrate and methadone hydrochloride.
- f) Write a explanatory note on phase I pathway of drug metabolism.
- g) Outline the synthesis and uses of dicyclomine and ethosuximide.
- h) Classify anticonvulsants alongwith their structures and enumerate the synthesis of phenytoin.
- i) Write a detailed note on adrenergic antagonists.

SECTION C

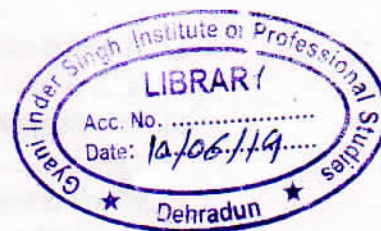
3. Attempt any two parts of the following:

[2×10]

- a) Write the synthesis and uses of halothane, phenylephrine, methohexital sodium and salbutamol.
- b) Explain SAR of barbiturates and benzodiazepines.
- c) Explain the SAR of phenothiazines along with synthesis of carbamazepine.
- d) Describe the cholinergic drug. Classify them and give example of each class.

BP 403

Even Semester Examination, 2018-19
B.PHARMA. (SEMESTER-IV)
PHYSICAL PHARMACEUTICS-II



Time: 03:00 Hours

Max Marks: 75

Notes: Attempt all sections.

SECTION-A

Note: Attempt every question

(20×1)

1. In general reaction rate constants in neutral pH are comparatively
 - a. Equal
 - b. Higher
 - c. Lower
 - d. Zero
2. The expiry date for a tablet is not mentioned on the label. It means that the expiry time in years is
3. The HLB range for lipophilic surfactant is
4. Solid/solid interfaces are important in
5. Flocculated suspensions exhibit the flow of a type.....
6. Dilatant flow is characterized as a reverse phenomenon of
7. The pseudoplastic flow behavior can be explained by
8. Which one of the following physical properties is not a rheological property?
 - a. Body and slip
 - b. Spreadability
 - c. Surface tension
 - d. Viscosity
9. Brook-field viscometer is an example of type.....
10. The system that undergoes gel to sol transformation is known as
11. The critical value of Zeta potential for a stable colloid is
12. An example for colloidal system is
13. For an ideal suspension the sedimentation volume should be
 - a. Equal to one
 - b. Less than one
 - c. More than one
 - d. Zero
14. Suspended particles become flocculated in a suspension because.....
15. In an emulsion the velocity of sedimentation is found to be negative. It means that the creaming is.....
16. For a stable emulsion, the phase volume ratio is generally around.....

17. The HLB range of an emulsifier employed in the preparation of water in oil emulsion is.....
18. The distribution of globules is not uniform in an emulsion. This stage is termed as
19. Which one of the following substances decrease the surface tension of water?
 - a. Lecithin
 - b. Methanal
 - c. Sodium chloride
 - d. Sucrose
20. For the wetting of a solid by liquids, the contact angle should have a value nearby
 - a. 0
 - b. 90
 - c. 180
 - d. 270

SECTION-B

Note: Answer any seven questions

(7×5)

1. Describe any two methods of preparing lyophobic colloids.
2. Write the principle and working of Ostwald viscometer.
3. Describe the term 'physical stability' in suspensions. Describe any one method used in the evaluation of physical stability of a suspension.
4. Explain the causes for the instability of emulsions, applications of HLB system in the preparation of emulsions.
5. Describe Andreasen pipette method of analyzing the particle size.
6. Derive first order rate constant.
7. Write a note on accelerated stability studies.
8. Explain isotonic solution and methods of adjusting tonicity.
9. Discuss derived properties of powders. Write two applications of micromeritics in the production of dosage forms.

SECTION-C

Note: Answer any two questions

(2×10)

1. What do you understand by the term specific surface of particles? How is it experimentally determined? What are its applications in pharmacy?
2. Define the term thixotropy and explain how would you determine thixotropy?
3. Discuss the signs of instability in an emulsion and suggest the preservative measures in detail.

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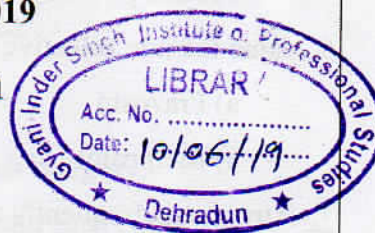
Paper ID and Roll No. to be filled in your Answer book

Roll. No.

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EVEN SEMESTER EXAMINATION-2019

B. Pharmacy I year IIndSem
PHARMACOLOGY-I
Subject Code : BP404T



Time- 3 Hrs

MM-75

Questions are divided into three sections A, B and C. Attempt all sections. Attempt questions as per instructions given.

SECTION A

MCQs, Each questions carry 2 marks, all are compulsory.

1. What does the term "bioavailability" mean?

- a) Plasma protein binding degree of substance
- b) Permeability through the brain-blood barrier
- c) Fraction of an uncharged drug reaching the systemic circulation following any route administration
- d) Amount of a substance in urine relative to the initial dose

2. Which of the following local anesthetics is called a universal anesthetic?

- a) Procaine
- b) Ropivacaine
- c) Lidocaine
- d) Bupivacaine

3. Name the commonest inducing agent for anaesthesia

- a) Nitrous Oxide
- b) Thiopentone Sodium
- c) Ketamine
- d) Halothane

4. First pass metabolism is

- a) Entry of drug in Liver
- b) Entry of drug in brain

- c) Entry of drug in BBB d) Entry of drug in lungs
5. Which of following is not an example of topical route of drug administration?
- a) Eye Drop b) Toothpaste
- b) Face powder d) Chewable Tablets
6. Name the non selective beta blocker
- a) Prazosin b) Propranolol
- c) Metoprolol d) Clonidine
7. Atropine is frequently used prior to administration of inhalant anesthetics to reduce:
- a) Muscle tone
- b) Secretions
- c) Nausea and vomiting
- d) All of the above
8. Catecholamine includes following EXCEPT:
- a) Ephedrine
- b) Epinephrine
- c) Isoprenaline
- d) Norepinephrine
9. Indicate the mechanism of barbiturate action (at hypnotic doses):
- a) Increasing the duration of the GABA-gated Cl^- channel openings
- b) Directly activating the chloride channels
- c) Increasing the frequency of Cl^- channel opening events
- d) All of the above
10. The drug of choice in the treatment of petit mal (absence seizures) is:
- a) Phenytoin
- b) Ethosuximide
- c) Phenobarbital
- d) Carbamazepin

SECTION B

Short answer type, Each question carry 5 marks, attempt any 7

1. Define biotransformation and explain the phase I & phase II metabolism.
2. Write a short note on
 - (i) Combined effects of drugs
 - (ii) Dose response relationship.
3. Define & Classify Parasympathomimetics. Explain the drug of each category.
4. Classify general anaesthetics by elaborating atleast one example from each category.
5. Write the mechanism of action of the following:
 - (i) Barbiturates
 - (ii) Benzodiazepines
 - (iii) Disulfiram
6. Write a short note on the following:
 1. Drug addiction
 2. Drug abuse
7. Define & Classify Sympatholytics. Explain the drug of each category.
8. Write the principle and mechanism of drug action by giving few examples.
9. Write a note on CNS stimulants drugs & Neuromuscular blocking agents.
10. Discuss treatment of Myasthenia Gravis.

SECTION C

Short answer type, each question contains 10 marks, attempt any 2.

1. Describe the different routes of drug administration by giving few examples for each route.
2. Define & Classify Epilepsy. Explain its etiology and the drug treatment used to manage epilepsy.
3. Define Parkinsons disease. Explain the etiology and drug treatment for the same
4. Explain the process of neurohumoral transmission in respect to autonomic nervous system.

BP404T

UTTARAKHAND TECHNICAL UNIVERSITY

Paper ID and Roll No. to be filled in your Answer book

Roll. No.

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EVEN SEMESTER EXAMINATION-2019

B.Pharm (SEMESTER –IV)

Subject Code : BP-405(T)

Time: 03.00 Hrs.

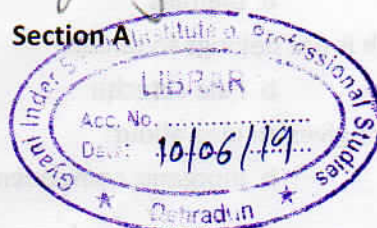
Note: Attempt all sections

Max. Marks: 75

Pharmacology

Section A

Note: All questions are compulsory.



20x1=20

Q1. Who is the father of medicine?

- a. Aristotle b. Dioscorides c. Hippocrates d. Galen

Q2. Drug is not under the class of organised drug:

- a. Leaves b. Fruits c. Flowers d. Gums

Q3. Drug which does not belong to leaves class:

- a. Senna b. Digitalis c. Eucalyptus d. Turmeric

Q4. Borntrager's test specified for:

- a. Cardiac glycosides b. Anthraquinone glycoside c. Saponin d. Steroids

Q5. Alkaloids are:

- a. Acidic compound b. Basic compound c. Neutral compound d. Nitrogenous basic compound

Q6. Tridosha exist in:

- a. Homeopathic system b. Ayurvedic system c. Unani system d. Siddha system

Q7. The residue remaining after incineration is known as:

- a. Ash b. Extract c. Waste material d. Foreign matter

Q8. The following is the test for alkaloids:

- a. Molish test b. Dragendoff's test c. Benedict test d. None

Q9. Karl fischer method is used in the determination of:

- a. Moisture content b. Ash content c. Bitterness content d. Chemical content

Q10. Example of lipid is:

- a. Castor oil b. Mentha oil c. Casein d. Pepsin

Q11. Heating a drug at 105°C in an oven to a constant weight is known as:

- a. Volatile oil determination b. Moisture content determination
c. Melting point determination d. Ash value determination

Q12. Swelling index is used for:

- a. Moisture b. Volatile oil c. Fibres d. Mucilage

Q13. The example of polymorphism is:

- a. Loin b. House fly c. Peacock d. Honeybee

Q14. Gaseous hormone is:

- a. Ethylene b. Auxin c. Absciscic acid d. Florigens

Q15. Who is the father of tissue culture?

- a. Banner b. Haberlandt c. Laibach d. Gautheret

Q16. In determination of bitterness value standard is:

- a. Quinine HCl b. Ammonium chloride c. Strychine HCl d. None

Q17. Example of alkaloid drug is:

- a. Cinchona b. Digitalis c. Coriander d. Liquorice

Q18. The drug which is not belongs to tannin:

- a. Myrobalam b. Pale catechu c. Ashoka d. Peppermint

Q19. Extractive value gives an idea about:

- a. Solubility b. Inorganic component c. Moisture content d. Foreign matter

Q20. This is the precursor of cytokinine:

- a. Adenine b. Guanine c. Cytidine d. Thymine

Section B

Note: Attempt any seven questions.

7X 5=35

Q1. Discuss present status and future scope of pharmacognosy in brief.

Q2. What is the difference between organised and unorganised drugs?

Q3. Explain lycopodium spor method

Q4. What is hybridization? Explain with suitable example.

Q5. Explain application of plant tissue culture in the field of pharmacognosy.

Q6. Explain identification tests of alkaloids.

Q7. Explain pharmacognostic profile of Tragacanth.

Q8. Write an informative note on Chaulmoogra oil.

Q9. Write an informative note on Ayurvedic system of Medicine.

Section C

Note: Attempt any two questions.

2X10=20

Q1. What is the need for classification? How is it done in case of crude drugs? Illustrate your answer with suitable example. 10

Q2. Define the term standardization. Enlist various methods of standardization of crude drugs. Explain physical method of standardization in detail. 10

Q3. Write an essay on cultivation and collection of drugs of natural origin. 10

BP405T