

Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2018-2019

Subject: Pharm. Organic Chemistry-III (BP401T)

Semester: IV

Day & Date: Monday, Feb 25, 2019

Class: S.Y.B. Pharm

Time: 10.30 am -12.00 pm

Max. Marks: 30

- Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram/ Structures wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10 marks

- Identify the number of stereoisomers for 3-bromo-2, 4, 5-trichlorohexane
a) 6 stereoisomers b) 8 stereoisomers c) 16 stereoisomers d) 24 stereoisomers
- Identify the type isomer for (R) 2-pentanol
a) Dextrorotatory isomer. c) Levorotatory isomer.
b) Has to be experimentally determined. d) None of these.
- Compare the physical properties of diastereomers
a) Different physical properties. c) Same physical properties.
b) Cannot determine. d) Same chemical properties
- Classify 2R, 3S-2, 3-dichloropentane and 2S, 3S-2, 3-dichloropentane.
a) Enantiomers c) Diastereomers
b) Constitutional isomers d) Identical
- Identify the type of alkene in $\text{CH}_3\text{CH}=\text{C}=\text{CH}_2$.
a) Isolated diene c) Conjugated diene
b) Allene. d) Alkyne
- Which of the following Compound shows *cis-trans* Isomerism.
a) 1- Pentene c) 2-methyl 2-pentene
b) 2- pentene d) 2-methyl 2-butene
- A molecule is said to be chiral
a) If it contain plain of symmetry c) If it contains center of symmetry
b) If it have non-superimposed mirror image d) All of these
- Which of the following can make difference in optical isomers?
a) Heat c) polarized light
b) Temperature d) pressure
- Dehydration of dicarboxylic acid obtain corresponding anhydride is difficult due to stereochemical arrangement
a) Maleic acid c) Succinic acid
b) Fumaric acid d) Glutamic acid
- The process of separation of racemic mixture is called as
a) Resolution c) Revolution
b) Reduction d) Racemization

QII Long Answers (Answer any 1 out of 2)

10 marks

- Explain CIP system of nomenclature in optical isomers detail with Examples.
- Explain 1) Resolution and Racemization of racemic mixture
2) Optical Activity and Optical Isomerism

QIII Short Answers (Answer any 2 out of 3)

10 marks

- Explain in detail Atropisomerism
- Give the reactions of chiral molecules.
- Explain methods of determination geometrical isomerism by
1. Cis-trans method 2. Syn and anti-system



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Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2020-2021

**Subject: Environmental Sciences
(BP206T)**

Class: Direct Second Year

Time: 2:30-4:00 PM

**Day & Date: Thursday, 22, July
2021**

Semester: IV

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks*

QI Long Answers (Answer any ONE)

1*10

- (1) Explain the structure & function of ecosystem in detail emphasizing its role in ecological balance.
- (2) State the significance of Renewable & Non-renewable energy resources in the conservation of environment.

QII Short Answers (Answer any FOUR)

4*5

- (1) State the problems associated with natural resources.
- (2) Explain the impact of Natural resources on environment and economy of the nation.
- (3) "Forest: An asset to balance the environment" elucidate the statement.
- (4) Explain the significance of 'Ecosystem' in human life.
- (5) State your role in the conservation of environment.
- (6) What are energy resources? State their importance.

-----END-----



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Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2018-2019

Subject	: Medicinal Chemistry I	Day & Date	: 26/02/2019, TUE
Class	: S. Y. B. Pharmacy	Semester	: IV
Time	: 10.30 am to 12.00 pm	Max. Marks	: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

- Q.1 Multiple Choice Questions [10]
- a ----- is capable of forming a ring structure with metal atoms
- a. Surfactants
 - b. Chelates
 - c. Ligands
 - d. All of the above
- b Medicinal chemistry is a science whose roots are interlinked with-
- a. Chemistry and Biology
 - b. Technology and Biology
 - c. Chemistry and Physics
 - d. None of the above
- c Which of the following is first precursor of ADRENALINE formation
- a. Tyrosine
 - b. DOPA
 - c. Dopamine
 - d. Nor-Adrenaline
- d Which of the following is the selective antagonist of α_1 receptor
- a. Prazosin
 - b. Yohimbine
 - c. Clonidine
 - d. Ergotamine
- e What does COMT stands for
- a. Catechol -o- methyl transferase
 - b. Catechol-oxy-methyl transferase
 - c. Catecholamine -o-methyl-transferase
 - d. Catecholamine-oxy-methyl-transferase
- f Glutathione is a tripeptide of
- a. Glutamic acid-Cysteine-Glycine
 - b. Glycine -cysteine-Glutamic acid
 - c. Cysteine-glutamic acid-glycine
 - d. Glycine-glutamic acid-cysteine
- g Prazocin belongs to the class of
- a. Pyridyl quinoxaline
 - b. Piprazinyl quinazoline
 - c. Pyridyl Quinazoline
 - d. Piperazinyl quinoxaline
- h How many carbon chains are essential for activity of propranolol
- a. 1 Carbon Chain
 - b. 2 Carbon Chain
 - c. 3 Carbon chain
 - d. 4 Carbon Chain
- i Phase II biotransformation reactions are called as
- a. Functionalization Reactions
 - b. True detoxification Reactions
 - c. Conjugation Reactions
 - d. Both b and c
- j Which enzyme is responsible for conversion of L-DOPA to Dopamine
- a. B-Hydroxylase
 - b. Tyrosine Kinase
 - c. Tyrosine hydroxylase
 - d. DOPA Decarboxylase
- Q.2 Answer the following short questions (any two) [10]
- a Define Biotransformation and write a short note on Phase I oxidation reaction
 - b Explain Bioisosterism and Isosterism with example
 - c Explain and draw the Biosynthetic Pathway of adrenergic neurotransmitters
 - d Classify α -adrenergic blockers with suitable example
- Q.3 Answer in detail of following (any one) [10]
- a Explain all Physico-chemical properties of drug action
 - b Give Classification of Adrenergic Drugs. Give Mode of action and discuss the SAR of the Adrenergic Drugs



8. Which of the following is non selective B blocker?

- a. Propranolol
- b. Metoprolol
- c. Isoprenaline
- d. Terbutaline

9. Phase II biotransformation reactions are also called as

- a. Functionalization Reactions
- b. True detoxification Reactions
- c. Conjugation Reactions
- d. Both b & c

10. Which enzymes is responsible for Metabolism of catecholamine

- a. Mono Amino Oxidase (MAO)
- b. Catecholamine O Methyl Transferase(COMT)
- c. DOPA Decarboxylase
- d. Both a and b

QII Long Answers (Answer any 1 out of 2)

10

1. Give detail classification of Cholinergic drugs. Give mode of action and discuss the SAR of the Cholinergic drugs
2. Explain all Physico-chemical Properties of drug action with examples.

QIII Short Answers (Answer any 2 out of 3)

10

1. Define biotransformation and write a short note on Phase I and Phase II reactions
2. Define Bioisosterism and write detail note with classification.
3. Explain and Draw the Biosynthetic pathways of Adrenergic neurotransmitters (Catecholamines)

****BEST OF LUCK****



Online First Sessional Theory Examination 2020-2021
(EVEN SEM)

Subject & Subject Code: Medicinal Chemistry-I (BP402T)

Day & Date: Tuesday 27-04-2021

Class: S.Y. B. Pharmacy

Semester: IV

Time: 10.30 AM to 12.00 PM

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Which of the following group (s) are responsible for effective binding of the acetylcholine to the muscarinic receptor
 - Ester group
 - Ammonium group
 - Ethylene bridge
 - Both a and b
- Following are the Phase I reactions except _____
 - Oxidative reactions
 - Hydrolytic reactions
 - Reductive reactions
 - sulphate conjugation
- Indirectly acting cholinergic drugs are _____
 - Neostigmine
 - Physostigmine
 - Edrophonium
 - All of the above
- The _____ enzyme is involved in the synthesis of acetylcholine
 - Choline acetyl transferase
 - Acetyl cholinesterase
 - Both (a) and (b)
 - None of the above
- Which one of the following is the physicochemical properties
 - Dielectric constant
 - Sedimentation
 - Viscosity
 - Ionization
- Botulinus toxins inhibit the _____
 - Release of acetylcholine
 - Release of norepinephrine
 - Release of tyrosine
 - Release of serine
- Which coenzyme is synthesized in the 1st step of the formation of Glucuronide?
 - Uridine triphosphate
 - UDP-glucose
 - Uridine-5'-diphosphate-alpha-D-glucuronic acid
 - Glucuronide
- _____ IUPAC name of Bethanechol
 - 2-(carbamoyle)-N,N,N-trimethylpropan-1-aminium
 - 2-(carbamoyleoxy)-N,N,N-trimethylpropan-1-aminium
 - 2-(carbamoyleoxy)-N,N,N-triethylpropan-1-aminium
 - 2-(carbamoyleoxy)-N,N,N-trimethylpropan-1-ol-aminium
- Which enzyme is important in the Phase II reactions?
 - Esterase
 - Amidases
 - Transferase
 - Aldo-keto-reductases
- What are xenobiotics?
 - Another form of antibiotics
 - A form of nutrient
 - Nutrients which kill the gut harmful microbes
 - Anything that is not nutrients and enters the body through different routes



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QII Long Answers (Answer any 1 out of 2)

10

1. Define Sympathomimetic agents. Give the classification of adrenergic drugs & Discuss the SAR of β phenyl ethyl amine
2. What do you mean by Biotransformation? Discuss in detail Phase-II Biotransformation reaction.

QIII Short Answers (Answer any 2 out of 3)

10

1. Give the MOA and SAR of Acetylcholine
2. Explain in detail Phase-I oxidative reaction. (Any five)
3. Classify β adrenergic blockers with suitable example and draw the chemical synthesis of Tolazoline and Propranolol.



First Sessional Theory Examination 2021-2022 (Even SEM)

Subject: Medicinal Chemistry-I (BP402T)

Day & Date: Tuesday, 7/6/2022

Class: Second Year B. Pharm.

Semester: IV

Time: 11:30 am – 12:30 pm

Max. Marks: 30

- Instructions: 1. All questions are compulsory
2. Draw a well labelled diagram wherever necessary
3. Right hand side number indicates full marks

Q. I. Solve the following Multiple Choice Questions (MCQs)

10

- 1 reaction is most common in drugs having ester or amide functional groups
 - a) Reduction
 - b) Oxidation
 - c) Hydrolysis
 - d) Acetylation
- 2 Microsome are selective to
 - a) Water-soluble drugs
 - b) Lipid soluble drugs
 - c) Acidic drugs
 - d) Basic drugs
- 3 What are xenobiotics?
 - a) Another form of antibiotics
 - b) A form of nutrient
 - c) Nutrients which kill the gut harmful microbes
 - d) Anything that is not nutrients and enters the body through different routes
- 4 Which of the following statements is the closest description of Phase I metabolism?
 - a) Reactions which add a polar molecule to a functional group already present on a drug or one of its metabolites
 - b) Reactions which occur in the blood supply.
 - c) Reactions which add a polar functional group to a drug.
 - d) Reactions which occur in the gut wall.
- 5 Diazepam gets metabolized into hydroxy diazepam is example of
 - a) Oxidation at allylic carbon atom
 - b) Oxidation at the carbon alpha to carbonyl and imino group
 - c) Oxidation at benzylic carbon atom
 - d) Aromatic and side chain hydroxylation
- 6 Which of the following enzyme converts dopamine to Norepinephrine?
 - a) L-Aromatic Amino Acid decarboxylase
 - b) Dopamine β -Hydroxylase
 - c) Phenyl ethanolamine-N-Methyl transferase
 - d) Phenylalanine Hydroxylase
- 7 Which drug is COMT resistant?
 - a) Isoproterenol
 - b) Salbutamol
 - c) Colterol
 - d) Epinephrine
- 8 Prazosin contains which of the following heterocycles?
 - a) Quinazoline + Piperazine + Furan
 - b) Quinoline + Pyridine + Furan
 - c) Quinoline + Piperazine + tetrahydrofuran
 - d) Quinazoline + Piperazine + tetrahydrofuran
- 9 Which of the following is NOT example of direct acting sympathomimetic agent?
 - a) Dopamine
 - b) Epinephrine
 - c) Clonidine
 - d) Metaraminol
- 10 Which of the following drugs is NOT used in the treatment of Myasthenia Gravis?
 - a) Neostigmine
 - b) Pyridostigmine
 - c) Ambenonium
 - d) Atropine

Q. II. Solve the following (any ONE)

10

1. Enlist and explain the various physicochemical properties in relation to biological action.
2. What is biotransformation? Explain in detail Phase I reactions of drug metabolism.

Q. III. Solve any TWO questions from the following.

10

1. Write synthesis of the Salbutamol and Phenylephrine.
2. Explain synthesis, storage, release and metabolism of catecholamines.
3. Explain SAR of aryl ethanolamine with suitable examples.



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**First Sessional Theory Examination 2021-2022
(EVEN SEM)**

Subject & Subject Code: Pharmacognosy & Phytochemistry I (BP405T)

Day & Date: Friday, 10th June 2022

Class: S. Y. B. Pharm

Time: 11.00 am to 12.30 pm

Semester: IV

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Rosette type calcium oxalate crystal is present in
(a) Cinnamon (b) Ipecac (c) Arjuna (d) Cinchona
2. Which of the following is example of bark containing drug
(a) Castor (b) Mango (c) Mustard (d) Cinchona
3. Which of the following is not a organized drug
(a) Fennel (b) Rauwolfia (c) Ipecac (d) Opium
4. _____ is used to trace the object under microscope
(a) Prism type camera lucida (b) Mirror camera lucida
(c) Both types of camera lucida (d) None
5. Keller-Killani test is used to detect _____ glycoside
(a) Saponin (b) Cardiac (c) Anthraquinone (d) Coumarin
6. The method in which scattering or spreading of the seeds on the soil, which may or may not be incorporated into the soil is called as _____
(a) Dibbling (b) Seed drilling (c) Broadcasting (d) Transplanting
7. Indole 3 acetic acid (IAA) is the example of _____
(a) Auxin (b) Cytokinins (c) Gibberellins (d) Abscisic acid
8. Crop rotation is an example of _____ method of pest control.
(a) Mechanical (b) Biological (c) Agricultural (d) Chemical
9. Agrobacterium is required for culture of
(a) Protoplast (b) Hairy root (c) Anther (d) Seed
10. The ability of plant cell to develop into a complete plant is called as
(a) Transformation (b) Transcription (c) Totipotency (d) Transduction

QII Long Answers (Answer any 1 out of 2)

10

1. Enlist & illustrate various factors affecting cultivation
2. Outline and discuss different methods for plant tissue culture. Enlist the application of plant tissue culture.

QIII Short Answers (Answer any 2 out of 3)

10

1. Define adulteration. Explain types of adulteration with example.
2. Enlist different physical methods of evaluation. Explain determination of moisture content, ash value & extractive value.
3. Explain quantitative microscopy by lycopodium spore method.



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First Sessional Theory Examination 2018-2019

Subject: Pharmacognosy & Phytochemistry-I

Day & Date: 01.03.2019, Friday

Class: S.Y. B. Pharm

Semester: IV

Time: 1:30 pm to 3.00 noon

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. *De materia medica* of _____ considered the authoritative source of pharmacological information.
a) Plinky b) Dioscorides c) Theophratus d) Galen
2. % purity of Lycopodium is calculated as:
a) $NxWx9400x100/SxMxP$ b) $NxWx94000x100/SxMxP$
c) $NxWx940x100/SxMxP$ d) $NxWx9400x1000/SxMxP$
3. $2000 \times C/a \times b$ is used to calculate
a) Swelling index b) Foam index c) Bitterness value d) Haemolytic index
4. Saponification Cloud test for identification of
a) Resin b) Mucilage c) Wax d) Steroids
5. Adulteration means-
a) Confirmation of identity b) determination of purity
c) Debasement of an article d) Confirmation and determination of purity & identity
6. In organoleptic evaluation the drugs are evaluated through-
a) Chemical constituents b) Therapeutic uses
c) Histological characters d) Gross morphology
7. Which is not the asexual method of propagation?
a) Cutting b) Grafting c) Budding d) By seeds
8. Polyploidy is define as-
a) Addition of one chromosome b) Multiplication of entire chromosome set
c) Submicroscopic changes in DNA material d) Cross structural changes.
9. The plant hormone which shows specific effect on the cell division is-
a) Auxins b) Abscisic acid c) Cytokinins d) Ethylene
10. Which of the following is not a trichome?
a) Glandular b) Non glandular c) Cruciferous d) Hydathodes

QII Long Answers (Answer any 1 out of 2)

10

1. Write a note on Classification of crude drugs along with its merits and demerits.
2. Describe in detail organoleptic, microscopic and physical evaluation method for DONO

QIII Short Answers (Answer any 2 out of 3)

10

1. Write a note on quantitative microscopy by Lycopodium spore method
2. Enlist different plant hormones. Explain auxin with its application.
3. Elaborate on different sources of crude drugs.



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**First Sessional Theory Examination 2019-2020
(EVEN SEM)**

Subject & Subject Code: Pharmacognosy & Phytochemistry-I BP405T **Semester:** IV

Day & Date: Friday, 6/3/2020

Class: S.Y.B. Pharmacy

Time: 2:30 pm to 4:00 pm

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Pest is a _____
 - a) Undesired animal
 - b) Undesired plant
 - c) both A & B
 - d) None of the above
2. coined the term Pharmacognosy.
 - a) Theophrastus
 - b) Gallen
 - c) Pelletier
 - d) Seydler
3. Sexual method of propagation includes.....
 - a) Seed propagation
 - b) Root propagation
 - c) Rhizome propagation
 - d) None of these
4. These systems of classification rely on the chemical similarity of a taxon.
 - a) Chemical
 - b) Taxonomical
 - c) Serotaxonomical
 - d) Chemotaxonomical
5. Lignified trichomes are present in _____
 - a) Senna
 - b) Datura
 - c) Vasaka
 - d) Nux-vomica
6. Anisocytic stomata are having number of Guard cells.
 - a) one
 - b) two
 - c) three
 - d) four
7. In organoleptic evaluation the drugs are evaluated through _____
 - a) Chemical constituents
 - b) Therapeutic uses
 - c) Histological characters
 - d) Gross morphology
8. Withering (1741-1799) discovered the use of _____
 - a) Aloe
 - b) Digitalis
 - c) Senna
 - d) Liquorice
9. 1mg of lycopodium powder contains _____ spores.
 - a) 94000
 - b) 93000
 - c) 84000
 - d) 74000
10. Which of the following is not unorganized drug
 - a) Tragacanth
 - b) Lard
 - c) Aloe
 - d) Datura

QII Long Answers (Answer any 1 out of 2)

10

1. Enlist different factors affecting cultivation. Explain different method for cultivation & collection of crude drugs.
2. What is the need of classification of crude drugs? Illustrate Alphabetical, Morphological, Chemical and Pharmacological classification of crude drugs.

QIII Short Answers (Answer any 2 out of 3)

10

1. Define Pharmacognosy. Enlist different sources of drugs with suitable example. Differentiate between organized and unorganized drug.
2. Explain in details about Plant growth regulators.
3. Explain applications of plant tissue culture in Pharmacognosy.



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First Sessional Theory Examination 2020-2021
(EVEN SEM)

Subject & Subject Code: Pharmacognosy & Phytochemistry I (BP405T)

Day & Date: Friday, 30th April 2021

Class: S. Y. B. Pharm

Semester: IV

Time: 10.30 am to 12.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. First binomial classification of plants given by _____
(a) Bentham (b) Hooker (c) Bentham and Hooker (d) Carl Linnaeus
2. Which of the following is obtained from source
(a) Agar (b) Insulin (c) Cephalosporin (d) Tragacanth
3. Which of the following is not a organized drug
(a) Fennel (b) Clove (c) Ipecac (d) Colophony
4. Prism is present in
(a) Abbe camera lucida (b) Swift Ives camera lucida (c) Both (d) None
5. Plants are cut few meter above the ground level and barks are removed. This method is known as
(a) Uprooting (b) Coppicing (c) Cutting (d) Felling
6. Suitable gas used as solvent in Super critical fluid extraction is
(a) CO₂ (b) NO₂ (c) O₂ (d) NH₄OH
7. Colchicine is used to induced
(a) Polyploidy (b) Mutation (c) Chemical race (d) Hybridization
8. Protoplast can be obtained by.....
(a) Oxidation of tissue (b) Saponification of tissue
(c) Enzymatic Degradation of cell wall (d) None of the above



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9. The ability of plant cell to develop into a complete plant is called as

- (a) Transformation (b) Transcription (c) Totipotency (d) Transduction

10. Protoplast cells are

- (a) Cells with cell wall (b) Cells with cell membrane without cell wall
(c) Cells with cell wall without cell membrane (d) Hybrid cell

QII Long Answers (Answer any 1 out of 2)

10

1. Explain in details about physical method of drug evaluation.
2. Describe various factors affecting cultivation.

QIII Short Answers (Answer any 2 out of 3)

10

1. Define adulteration. Explain types of adulteration with example.
2. What are plant growth regulators? Explain Auxin with its function.
3. Write a note on **(any one)**
 - a) Callus culture
 - b) Protoplast culture

*****All The Best*****

First Sessional Theory Examination 2018-2019

Subject: Pharmacology - I

Day & Date: 28.02.2019, Thursday

Class: S.Y. B. Pharm

Semester: IV

Time: 10.30 am to 12.00 noon

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Lipid soluble drug has following advantages
 - a. Low toxicity
 - ~~b. Rapid absorption~~
 - c. Rapid Excretion
 - d. Rapid metabolism
2. If the bioavailability of a drug is 100%, it
 - a. Is absorbed significantly
 - b. Is metabolized in the liver
 - c. Is widely distributed in the body
 - ~~d. Does not undergo first-pass effect~~
3. All of drugs are enzyme inducers except
 - a. Phenobarbitone
 - b. Isoniazid
 - c. Phenylbutazone
 - ~~d. Ketoconazole~~
4. Which of the following food should not be taken immediately after administration of Tetracycline -
 - a. Vegetables
 - b. Meat
 - ~~c. Milk~~
 - d. Sugar
5. Agonist have
 - a. Affinity
 - b. Intrinsic activity
 - ~~c. Affinity and intrinsic activity~~
 - d. None of the above
6. Therapeutic index of drug is
 - ~~a. LD50 / ED50~~
 - b. LD50 X ED50
 - c. ED50 / LD50
 - d. All of the above
7. Type A adverse drug reactions are -
 - ~~a. Dose dependent and predictable~~
 - b. Dose independent and unpredictable
 - c. Both a and b
 - d. None of the above
8. The following drug causes phocomelia -
 - ~~a. Thalidomide~~
 - b. Penicillins
 - c. Digoxin
 - d. Propranolol
9. Type 1 reactions are due to following antibodies -
 - a. IgG
 - b. IgM
 - ~~c. IgE~~
 - d. None of the above
10. The first G-protein coupled receptors was fully identified and studied are -
 - a. Muscarinic Ach receptor
 - b. Nicotinic Ach receptor
 - ~~c. Beta adrenergic receptor~~
 - d. Alpha adrenergic receptor

QII Long Answers (Answer any 1 out of 2)

10

1. Define and classify receptors with suitable example. Explain about G-protein coupled receptors
2. Define absorptions. Explain in detail about factors affecting process of absorption of drug.

QIII Short Answers (Answer any 2 out of 3)

10

1. Define pharmacology. Explain in detail about history and development of pharmacology.
2. Explain about first order kinetics of drug elimination.
3. Explain about glucuronide conjugation and acetylation process of metabolism Of drug.



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First Sessional Theory Examination 2020-2021

(Even SEM)

Subject & Subject Code: Pharmacology I (BP404T)

4Day & Date: Thursday, 29.04.2021

Class: Second Year B. Pharm

Semester: IV

Time:10.30AM to 12.30PM

Max. Marks: 30

Instructions: 1. All questions are compulsory.

2. Draw a well labelled diagram wherever necessary.

3. Right hand side number indicates full marks.

Q.I Multiple-choice questions (MCQs)

10

1. --- refers to movement of drug in and alteration of drug by the body.
 - a. Pharmacodynamics
 - b. Pharmacokinetics
 - c. Absorption
 - d. Metabolism
2. A biological phenomenon often associated with "drug abuse" is called as
 - a. Dependence
 - b. Misuse
 - c. Habituation
 - d. Dysphoria
3. Chinese are tolerant to purgative action of castor oil is an example of
 - a. Species tolerance
 - b. Acute tolerance
 - c. Race tolerance
 - d. Cross tolerance
4. Anaphylaxis after parenteral administration of penicillins is an example of
 - a. Immediate reactions
 - b. Cytolytic reactions
 - c. Serum sickness
 - d. Delayed reactions
5. Nicotinic acetylcholine receptors is an example of ---
 - a. G Protein coupled receptors
 - b. Ligand gated ion channels
 - c. Kinase linked receptors
 - d. Nuclear receptors
6. The pentameric structure of ligand gated ion channel possesses ---- acetylcholine binding sites
 - a. One
 - b. Two
 - c. Three
 - d. Four



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7. ---- receptors mediate the actions of protein mediators such as growth factors, cytokines and hormones
- G Protein coupled receptors
 - Ligand gated ion channels
 - Kinase linked receptors
 - Nuclear receptors
8. The class I type of nuclear receptors are mainly present in
- Nucleus
 - Plasma membrane
 - Extracellular membrane
 - Cytoplasm
9. The first G protein coupled receptors to be fully characterized was --
- α adrenoceptors
 - β adrenoceptors
 - Nicotinic Ach receptors
 - Muscarinic Ach receptors
10. The measurement of margin of safety of drug is associated with
- Drug antagonism
 - Desensitization
 - Drug agonism
 - Therapeutic index

Q.II Long Answers (Answer any 1 out of 2)

10


- Define absorption. Explain in detail about factors affecting the process of absorption.
- Define and classify receptors. Explain the G protein coupled receptors.

Q.III Short Answers (Answers any 2 out of 3)

10

- Define elimination. Enlist route of elimination of drug. Explain the first order and second order kinetics of elimination.
- Define drug antagonism. Explain the various types of drug antagonism.
- Explain in details about new drug development process of drug.

*** END***


Sherikar Abdulla



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Second Sessional Theory Examination 2020-2021

(Even SEM)

Subject & Subject Code: Pharmacology I (BP404T)

Day & Date: Thursday, 01.07.2021

Class: Second Year B. Pharm

Semester: IV

Time: 10.30AM to 12.00PM

Max. Marks: 30

Instructions: 1. All questions are compulsory.

2. Draw a well labelled diagram wherever necessary.

3. Right hand side number indicates full marks.

Q.I Multiple-choice questions (MCQs)

10

1. The local anaesthetic with the longest duration of action is:

a. Procaine

b. Chlorprocaine

c. Lignocaine

d. Dibucaine

2. The choline ester resistant to both true and pseudocholinesterase is:

a. Methacholine

b. Bethanechol

c. Benzoylcholine

d. Butyrylcholine

3. Atropine does not exert relaxant/antispasmodic effect on the following muscle:

a. Intestinal

b. Ureteric

c. Bronchial

d. Laryngeal

4. Low doses of adrenaline dilate the following vascular bed:

a. Cutaneous

b. Mucosal

c. Renal

d. Skeletal muscle

5. Propranolol does not block the following action of adrenaline:

a. Bronchodilatation

b. Lipolysis

c. Muscle tremor

d. Mydriasis



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6. The following general anaesthetic has poor muscle relaxant action:
- Ether
 - Nitrous oxide
 - Halothane
 - Isoflurane
7. The following drug displaces plasma protein bound phenytoin as well as decreases its metabolism:
- Carbamazepine
 - Sodium valproate
 - Cimetidine
 - Chloramphenicol
8. Chlorpromazine therapy increases the secretion of the following hormone:
- Prolactin
 - Gonadotropin
 - Corticotropin
 - Antidiuretic hormone
9. Which of the following is a selective MAO-B inhibitor:
- Selegiline
 - Clorgyline
 - Moclobemide
 - Tranlycypromine
10. Morphine has high affinity for the following opioid receptor(s):
- μ (Mu)
 - κ (Kappa)
 - δ (Delta)
 - All of the above

Q.II Long Answers (Answer any 1 out of 2) 10

- Classify antimuscarinic agents with suitable examples. Explain the Pharmacology of atropine.
- Classify sympatholytic agents. Explain the pharmacology of propranolol

Q.III Short Answers (Answers any 2 out of 3) 10

- Classify opioid analgesics. Explain the pharmacology of morphine.
- Explain the pharmacotherapy of Parkinson disease.
- Define and classify sedative hypnotics. Explain the pharmacology of diazepam.

*** END***


Sherikar Abdulla



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**First Sessional Theory Examination 2021-2022
(EVEN SEM)**

Subject & Subject Code: PHARMACOLOGY-I, BP404T

Day & Date: Thursday, 09.06.2022

Class: S. Y. B. Pharm.

Time: 11:00 am-12.30 pm

Semester: IV

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Right hand side number indicates full marks*

QI. Multiple Choice Questions (MCQs)

10

- Drug metabolism mainly occurs in:
a. Liver b. Brain c. Spleen d. Kidneys
- Absorption is favored when the drug is:
a. Nonionized b. Ionized c. Hydrophilic d. None of the above
- The drug which binds to the receptor but does not produce a pharmacological effect is called _____ of that receptor:
a. Agonist b. Antagonist c. Partial agonist d. Inverse agonist
- Pharmacodynamics involve the study of the following EXCEPT:
a. Distribution b. Mechanism of action c. Side effects d. Therapeutic effects
- Type I allergic reactions are also called:
a. Anaphylactic b. Cytolytic c. Serum sickness d. Delayed
- Aldehyde syndrome is associated with therapy of
a. Diazepam b. Fomepizole c. Disulfiram d. Naltrexone
- Drug used to produce dissociative anesthesia
a. Fentanyl b. Halothane c. Diazepam d. Ketamine
- Which statement is correct for hypnotics?
a. Increase sleep latency + increase duration of non-REM sleep
b. Decrease sleep latency + increase duration of REM sleep
c. Decrease sleep latency + increase duration of REM and non-REM sleep
d. Decrease sleep latency + increase duration of non-REM sleep
- Which of the following acts on serotonin receptors?
Diazepam b. Alprazolam c. Buspirone d. Propranolol
- In clinical trials, the experiments are carried out in:
a. Rats b. Humans c. Rabbits d. Monkeys

QII. Long Answers (Answer any 1 out of 2)

10

- Define and classify general anesthetics. Explain various stages of inhalational anesthesia.
- Classify opioid analgesics and antagonists. Explain the mechanism of action, therapeutic uses, and adverse effects of morphine.

QIII. Short Answers (Answer any 2 out of 3)

10

- Enlist different factors affecting drug absorption. Explain any FOUR.
- Define receptors. Explain G-protein coupled receptor.
- Define drug interaction. Explain antagonism with examples.



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First Sessional Theory Examination 2021-2022
(EVEN SEM)

Subject & Subject Code: PHARMACOLOGY-I, BP404T

Day & Date: Thursday, 09.06.2022

Class: S. Y. B. Pharm.

Time: 11:00 am-12.30 pm

Semester: IV

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Right hand side number indicates full marks

QI. Multiple Choice Questions (MCQs)

10

1. Drug metabolism mainly occurs in:
a. Liver b. Brain c. Spleen d. Kidneys
2. Absorption is favored when the drug is:
a. Nonionized b. Ionized c. Hydrophilic d. None of the above
3. The drug which binds to the receptor but does not produce a pharmacological effect is called_____ of that receptor:
a. Agonist b. Antagonist c. Partial agonist d. Inverse agonist
4. Pharmacodynamics involve the study of the following EXCEPT:
a. Distribution b. Mechanism of action c. Side effects d. Therapeutic effects
5. Type I allergic reactions are also called:
a. Anaphylactic b. Cytolytic c. Serum sickness d. Delayed
6. Aldehyde syndrome is associated with therapy of
a. Diazepam b. Fomepizole c. Disulfiram d. Naltrexone
7. Drug used to produce dissociative anesthesia
a. Fentanyl b. Halothane c. Diazepam d. Ketamine
8. Which statement is correct for hypnotics?
a. Increase sleep latency + increase duration of non-REM sleep
b. Decrease sleep latency + increase duration of REM sleep
c. Decrease sleep latency + increase duration of REM and non-REM sleep
d. Decrease sleep latency + increase duration of non-REM sleep
9. Which of the following acts on serotonin receptors?
Diazepam b. Alprazolam c. Buspirone d. Propranolol
10. In clinical trials, the experiments are carried out in:
a. Rats b. Humans c. Rabbits d. Monkeys

QII. Long Answers (Answer any 1 out of 2)

10

1. Define and classify general anesthetics. Explain various stages of inhalational anesthesia.
2. Classify opioid analgesics and antagonists. Explain the mechanism of action, therapeutic uses, and adverse effects of morphine.

QIII. Short Answers (Answer any 2 out of 3)

10

1. Enlist different factors affecting drug absorption. Explain any FOUR.
2. Define receptors. Explain G-protein coupled receptor.
3. Define drug interaction. Explain antagonism with examples.



First Sessional Theory Examination 2019-2020
(EVEN SEM)

Subject & Subject Code: Pharmacology – I (BP404T)

Day & Date: Thursday & 05/03/2020

Class: Second Year B. Pharm

Semester: IV

Time: 02:30Pm to 04:00Pm

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs) 10

1. The Chinese Materia Medica is called as –
a. Papyri b. Pan Tsao c. Rigveda d. Ayurveda
2. Drugs with intermediate level of efficacy is called as-
a. Agonist b. Antagonist
c. Partial agonist d. Inverse agonist
3. The potency of drug is expressed as
a. ED50 b. EC50 c. pD2 d. All of the above
4. Negros are well tolerated to mydriatic doses of ephedrine is an example of
a. Species tolerance c. Both a & b
b. Race tolerance d. None of the above
5. Type III allergic reactions are developed due to ---- antibodies
a. IgG b. IgE c. IgM d. Both a & c
6. In plasma membrane, the facing orientation of hydrophilic head is
a. Inward b. Outward
c. Both a & b d. None of the above
7. Drug induced diseases are known as

****BEST OF LUCK****

- 1. Explain about glucuronidation and oxidation metabolic reactions.
- 2. Explain the muscarinic and nicotinic receptors of acetylcholine.
- 3. Explain the concept of first pass metabolism and enterohepatic recycling of drug.

QIII Short Answers (Answer any 2 out of 3)

10

- 1. Define distribution. Explain the various physiological barriers and factors affecting the process of distribution.
- 2. Define receptors. Explain in detail about G protein coupled receptors.

QII Long Answers (Answer any 1 out of 2)

10

- 8. The transport of acetylcholine into synaptic vesicle is blocked by
 - a. Idiosyncratic
 - b. Iatrogenic
 - c. Allergic
 - d. Teratogenic
- 9. In heart predominantly present muscarinic receptors are
 - a. M1
 - b. M2
 - c. M3
 - d. M4
- 10. Macromolecules are transported across the plasma membrane by
 - a. Endocytosis & osmosis
 - b. Exocytosis & osmosis
 - c. Endocytosis & Exocytosis
 - d. Both a & b



First Sessional Theory Examination 2021-2022

(EVEN SEM)

Subject: Pharmaceutical Organic Chemistry III (BP401T) **Day & Date:** Monday 06/06/2022

Class: Second Year B. Pharm.

Semester: IV

Time: 11:00 am – 12:30 pm

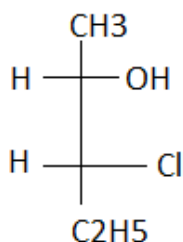
Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labelled diagram wherever necessary
3. Right hand side number indicates full marks

Q. I. Solve the following Multiple Choice Questions (MCQs)

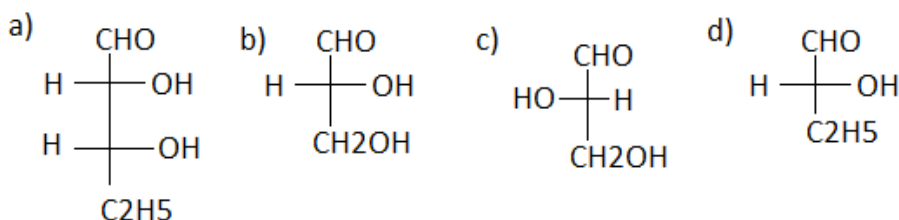
10

1. The absolute configuration of following structure is



- a) 2S,3S b) 2R,3S c) 2S,3R d) 2R,3R

2. Which of the following is the correct structure of D-glyceraldehyde?



3. How many optical isomers are possible for 2,3-butanediol?

- a) 2 b) 4 c) 3 d) 8

4. Enantiotopic hydrogens are

- a) Two hydrogens attached to a chiral carbon
b) Two hydrogens on same side of double bond
c) Two hydrogens on same side of cycloalkane
d) Two hydrogens attached to a carbon with other two different groups

5. A chiral molecular unit that can be temporarily incorporated in an achiral substrate in asymmetric synthesis is called as.....

- a) chiral pool b) chiral auxiliary c) chiral reagent d) none of the above

6. Which of the following compound will exhibit geometrical isomerism?

- a) 1-butene b) 1,2-butadiene c) 2-chloro-2-butene d) 2-methyl-2-butene

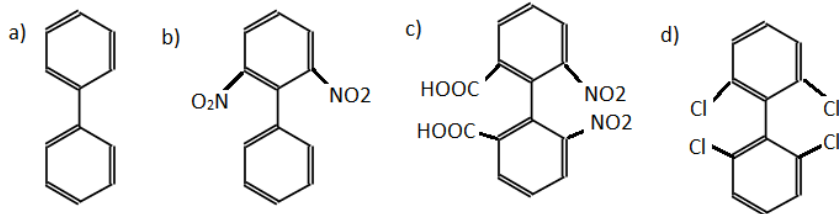


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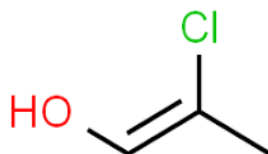
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7. Which of the following compound will show atropisomerism

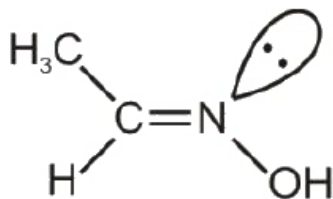


8. Assign the configuration to following compound



- a) Z b) E c) R d) S

9. The following structure indicates



- a) Syn- oxime b) Anti- oxime c) Z- oxime d) R- oxime

10. The correct sequence of increasing potential energy in cyclohexane conformations is

- a) Chair < boat < twist boat < half chair b) Half chair < boat < twist boat < chair
c) Boat < chair < twist boat < half chair d) Chair < twist boat < boat < half chair

Q. II. Solve the following (any ONE)

10

1. What is racemic modification? Explain the different methods for resolution of racemic modifications.
2. Explain the terms enantiomers and diastereomers. Write a note on different elements of symmetry.

Q. III. Solve any TWO questions from the following.

10

1. Explain why cis isomers have lower melting point and higher boiling point than corresponding trans isomers.
2. Explain the different conformations of cyclohexane with energy profile diagram.
3. Explain the different conformations of n-butane with energy profile diagram..



First Sessional Theory Examination 2019-2020
(EVEN SEM)

Subject & Subject Code: POC III BP401T **Day & Date:** Monday
02/03/2020

Class: Second Year B Pharmacy

Semester: IV

Time: 2.30 pm to 4.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Which of the isomers can be interconverted through rotation around C-C single bond

- a) Conformer b) Diastereomers c) Enantiomers d) Meso compounds

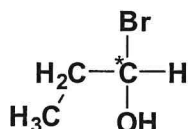
2. A molecule is said to be chiral if it has the C attached to different groups

- a) 1 b) 2 c) 3 d) 4

3. Diastereotopic protons can be differentiated by

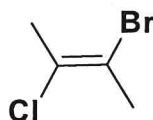
- a) Mass spectrometry b) NMR spectroscopy c) IR spectroscopy d) None of the above

4. Assign R & S configuration to the following compound



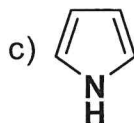
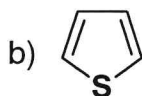
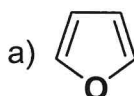
- a) R b) S c) R&S d) None of the above

5. Assign E & Z configuration to the following compound



- a) Z b) E c) EZ d) EE

6. Which is the correct structure of furan



- d) None of these



7. Geometrical isomers formed in which compounds

- a) In alkene b) In cycloalkane/ene c) both a & b d) None of the above

8 Electrophilic substitutions in furan usually occurs at

- a) C3 atom b) C2 atom c) Both a & b d) None of the above

9. The property of compounds to rotate the plane polarized light is known as

- a) Optical activity b) Dipole moment c) electronegativity d) all of the above

10 The most stable conformation of cyclohexane is

- a) Half chair b) Chair c) Boat d) Twist boat

QII Long Answers (Answer any 1 out of 2)

10

1. Give synthesis, reactions and medicinal uses of Pyrole?
2. Explain in detail about the conformations of n-Butane?

QIII Short Answers (Answer any 2 out of 3)

10

1. Define diastereomers and meso compounds? Are the meso compounds are optically active or inactive? Explain with suitable example?
2. Give the methods of determination of geometrical isomers?
3. Write short note on resolution of racemic mixture?

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First Sessional Theory Examination 2020-2021
(EVEN SEM)

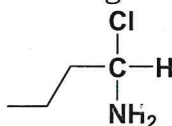
Subject & Subject Code: POC III BP401T **Day & Date:** Monday 26/04/2021
Class: Second Year B Pharmacy **Semester:** IV
Time: 10.30 am to 12.00 pm **Max. Marks:** 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

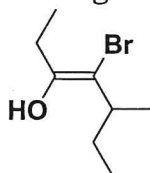
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- Enantiomers mean isomers which are.....
a) Not mirror images b) mirror images
c) Superimposable mirror images d) Non superimposable mirror images
- Racemic mixtures are optically.....
a) Active b) Inactive c) Both d) None of the above
- Ethambutol is an example of.....
a) Meso compound b) Chiral compound c) Achiral compound d) Planar compound
- Assign R & S configuration to the following compound



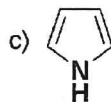
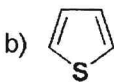
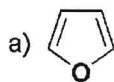
- a) R b) S c) R&S d) None of the above

- Assign E & Z configuration to the following compound



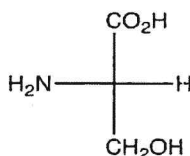
- a) Z b) E c) EZ d) EE

- Which is the correct structure of thiophene



- d) None of these

- Assign the D or L system of nomenclature for the following compound



- a) d b) l c) D d) L

- Electrophilic substitutions in thiophene favorably occurs at

- a) C2 atom b) C3 atom c) C4 d) None of the above

- The most stable conformation of cyclohexane is

- a) Half chair b) Chair c) Boat d) Twist boat

- Which is more reactive towards electrophilic substitution reactions.....

- a) Furan b) Pyrole c) Thiophene d) Benzene



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QII Long Answers (Answer any 1 out of 2)

10

1. What are racemic mixtures? Write in detail about various methods for resolution of racemic mixture?
2. Give synthesis, reactions and medicinal uses of Pyrole?

QIII Short Answers (Answer any 2 out of 3)

10

1. Write in short about the conformational isomerism in cyclohexane?
2. Write a short note on stereospecific and stereoselective reactions?
3. a) Enlist the methods of determination of configuration of geometrical isomers?
b) Draw the structures of oxazole & furan?

**Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule**

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2018-2019

Subject: Physical Pharmaceutics-II (BP 403T)

Day & Date: Wednesday, 27/02/2019

Class: S. Y. B. Pharmacy

Semester: IV

Time: 10.30 am to 12.00 pm

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

Q1. Multiple Choice Questions (MCQs)

10 M

1. According to Schulze-Hardy rule the precipitation power increases rapidly with the.....
A. Presence of valence or charge of the ions, B. Lowering the interfacial tension
C. Decreasing the freezing point, D. Elevation of boiling point
2. The protective ability of colloids is measured as.....
A. Zeta potential B. Streaming potential
C. Gold number D. None of the above
3. The potential difference develop when particles settle under the influence of gravity is called.....
A. Streaming potential B. Oxidation potential
C. Reduction potential D. Sedimentation potential
4. is the method of combining negatively and positively charged hydrophilic colloids
A. Coacervation B. Peptization C. Flocculation D. Coagulation
5. When distance between particles are large, the particles experience attractive force and aggregates are formed. This is known as
A. Primary minimum B. Potential barrier
C. Secondary minimum D. Interparticle distance
6. One centipoise is equal to..... poise
A. 0.1 B. 0.01 C. 0.001 D. 1
7. Fluidity is
A. Reciprocal of density B. Reciprocal of surface tension
C. Reciprocal of volume D. Reciprocal of viscosity
8. Which is the following viscometer is based on the principle of Stokes' Law.
A. Cup and Bob viscometer B. Falling Sphere Viscometer
C. Cone and plate viscometer D. Rotational viscometer
9. The system that undergoes gel-to-sol transformation is known as
A. Elastic B. Permanent deformation
C. Shear thinning D. Shear thickening
10. The change in velocity between two planes of liquid which is separated by distance is
A. Rate of shear B. Shearing stress C. Strain D. Yield value

Q2. Long Answers (Answer any 1 out of 2)

10 M

1. Discuss Kinetic properties of colloids.
2. What is the concept of Rheology? Explain Newtonian and non-newtonian flow system with suitable examples.

Q3. Short Answers (Answer any 2 out of 3)

10 M

1. Explain the concept of DLVO theory. How this theory is applied for stabilizing the colloidal dispersion.
2. Explain the concept of Donnan-membrane equilibrium.
3. Elaborate the concept of Thixotropy & Negative thixotropy.



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First Sessional Theory Examination 2019-2020
(EVEN SEM)

Subject & Code: Physical Pharmaceutics-II (BP403T) **Max. Marks : 30**

Class: S. Y. B. Pharmacy

Semester : IV

Time: 02.30 – 4.30 pm

Day & Date: Wednesday 04/03/2020

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10 Marks

1. is the irreversible type of colloids?
A. Lyophilic colloids B. Lyophobic colloids
C. Association colloids D. Hydrophilic colloids
2. The value of Poisson ratio ranges from
A. 0.001 to 0.01 B. 0.1 to 0.5
C. 1 to 5 D. 2 to 4
3. The potential difference develop when particles settle under the influence of gravity is called
A. Streaming Potential B. Sedimentation Potential
C. Reduction Potential D. Oxidation Potential
4. The protective ability of colloids is measured as
A. Zeta potential B. Streaming potential
C. Gold Number D. None of the above
5. When the distance between the particles are large, the particles experience attractive force and aggregates are formed. This is Known as
A. Primary minimum B. Potential Barrier
C. Secondary minimum D. Interparticle distance
6. The reciprocal of mobility is known as
A. Apparent viscosity B. Kinematic viscosity
C. Plastic viscosity D. Fluidity
7. The unit of viscosity is
A. Newton Sec m B. Newton Sec² m⁻²
C. Newton Sec⁻¹ m⁻¹ D. Newton Sec m⁻²
8. Which of the following viscometer is also called suspended level viscometer
A. Capillary Viscometer B. Cup and Bob Viscometer

- C. Cone & Plate viscometer D. Ubbelohde viscometer
9. Negative Thixotropy is a phenomenon in which there is
- A. Decrease in viscosity on down curve
 - B. Decrease in viscosity on up curve.
 - C. Increase in viscosity on down curve
 - D. Increase in viscosity on up curve
- 10 The temperature at which the solubility of the surfactant is equal to CMC is
- A. Boiling Point B. Melting Point
 - C. Kraft Point D. None of The Above

QII Long Answers (Answer any 1 out of 2)

10 Marks

1. Discuss in detail kinetic properties of Colloid systems.
2. Classify the viscometers and write a note on Rotational viscometers.

QIII Short Answers (Answer any 2 out of 3)

10 Marks

1. Differentiate between Plastic & Elastic deformation. Add a note on Heckel equation.
2. Explain in detail Non-Newtonian flow system with suitable examples & its Rheograms.

OR

Explain in detail about Thixotropy, measurement methods and its significance in pharmaceutical formulations.

3. What are Colloidal dispersion? Classify Colloids & compare their general properties.

****BEST OF LUCK****



First Sessional Theory Examination 2020-2021
(Even Semester)

Subject & Subject Code: BP403T Physical Pharmaceutics-II

Day & Date: Wed, 28/04/2021

Class: Second Year B Pharm

Semester: IV

Time: 10.30 am – 12.00 pm

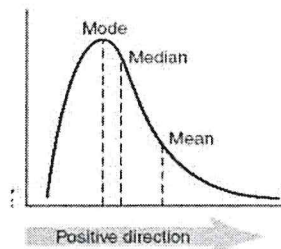
Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10 M

1. Negative Thixotropy is a phenomenon in which there is
 - A. Increase in viscosity on down curve
 - B. Increase in viscosity on up curve
 - C. Decrease in viscosity on down curve
 - D. Decrease in viscosity on up curve
2. The distribution of particles in following curve is elongated towards higher size range, the pattern is known as.....



- A. Negative skewness
 - B. Positive skewness
 - C. Both A & B
 - D. None of the above
3. According to USP, Coarse powder is having particle size of μm
 - A. 90-125
 - B. 180-355
 - C. 355—1000
 - D. > 100



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4. When the angle of repose is between $41-45^\circ$ it will indicate that the powder material is having Flow.
 - A. Excellent
 - B. Good
 - C. Poor
 - D. Passable

5. The reciprocal of mobility is known as
 - A. Apparent viscosity
 - B. Kinematic viscosity
 - C. Plastic viscosity
 - D. Fluidity

6. The unit of viscosity is
 - A. Newton Sec m
 - B. Newton Sec m^{-2}
 - C. Newton Sec² m^{-2}
 - D. Newton Sec⁻¹ m^{-1}

7.method is based on the principle that the resistance offered to the flow of a fluid such as air through a plug of compacted powder is proportional to the surface area of the powder.
 - A. Air permeability method
 - B. Adsorption method
 - C. Coulter Counter apparatus
 - D. Flow properties of powders

8. If Carr's compressibility index value is in between 26 to 31, then flow will be
 - A. Passable
 - B. Poor
 - C. Excellent
 - D. Very poor

9. Particle size ranging from __to _ μm is measured by conductivity method
 - A. 0.1 to 100
 - B. 0.2 to 200
 - C. 0.5 to 500
 - D. 0.4 to 400

10. System that undergoes gel to sol transformation is
 - A. Elastic
 - B. Permanent deformation
 - C. Shear thickening
 - D. Shear thinning



QII Long Answers (Answer any 1 out of 2)

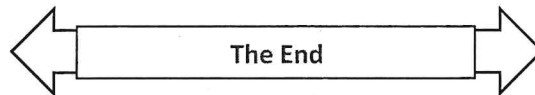
10 M

1. What is the concept of Rheology? Explain Newtonian and Non-Newtonian flow system with suitable examples.
2. Define Micromeritics with its applications & discuss any two methods for determining particle size in detail.

QIII Short Answers (Answer any 2 out of 3)

10 M

1. Classify the viscometers and write a note on any ONE Rotational viscometer.
2. Explain in detail about Thixotropy, measurement methods and its significance in pharmaceutical formulations.
3. Explain any two methods used to determine surface area of powder.





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First Sessional Theory Examination 2021-2022 (EVEN SEM)

Subject	: Physical Pharmaceutics-II (BP403T)	Day & Date	: Wed, 08/06/2022
Class	: Second Year B. Pharmacy	Semester	: IV
Time	: 11:00 am – 12:30 pm	Max. Marks	: 30

Instructions:

1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10 M

1. Gold number is defined as number of milligram of protective colloid required in 10 mL of red gold sol to prevent the change in colour from red to violet on addition of 1 mL of..... Solution.
A) 1 % NaCl B) 0.1 % NaCl C) 1 % KCl D) 0.1 % KCl
2. Sedimentation velocity of spherical particles is governed by.....
A) Charle's Law B) Stoke's Law C) Osmotic Pressure D) None of the above
3. is the difference in the potential between the shear plane & the electroneutral region in the dispersion
A) Peptization B) Nernst potential C) Electrokinetic Potential D) Steady State
4. For an ideal suspension, the sedimentation volume should be...
A) Zero B) Less than 1 C) More than 1 D) Equal to 1
5. is the process of formation of light, fluffy aggregates held together by physical forces.
A) Flocculation B) Deflocculation C) Coalescence D) All of these
6. Sodium chloride is example of..... material as per Heckel equation.
A) Type A B) Type B C) Type C D) Type C
7. $\eta_1 = t(S_b - S_f) B$ is used for viscosity determination by using..... viscometer
A) Capillary B) Falling Sphere C) Cup & Bob D) Cone & Plate
8. Shear thickening system is also known as..... flow.
A) Plastic B) Pseudoplastic c) Dilatant D) Spurs
9. $\mu = \frac{\text{Lateral Strain}}{\text{Linear Strain}}$
A) Elastic modulus B) Hookes law C) Heckel equation D) Poisson's ratio
10. The reciprocal of viscosity is known as.....
A) Fluidity B) Mobility C) Ductility D) Plug flow

QII Long Answers Question (Answer any 1 out of 2)

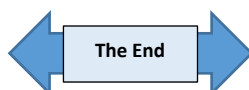
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1. What are the properties of colloids? Explain kinetic properties in detail.
2. Write a detail note on formulation of suspensions.

QIII Short Answers Question (Answer any 2 out of 3)

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- i. Elaborate the concept of Thixotropy & Negative thixotropy.
- ii. Classify the viscometers and write a detail note on any one Rotational viscometer.
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First Sessional Theory Examination 2021-2022 (EVEN SEM)

Subject	: Physical Pharmaceutics-II (BP403T)	Day & Date	: Wed, 08/06/2022
Class	: Second Year B. Pharmacy	Semester	: IV
Time	: 11:00 am – 12:30 pm	Max. Marks	: 30

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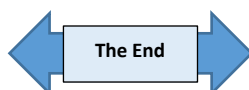
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- ii. Classify the viscometers and write a detail note on any one Rotational viscometer.
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Second Sessional Theory Examination 2019-2020 (EVEN SEM)
Subject & Subject Code: Computer Application in Pharmacy (BP 205T)
Day & Date: Monday day 18/05/2020 **Class:** F.Y and DSY B. Pharm
Time: 10 to 11 am

Semester: II/ IV
Max. Marks: 30 Marks

Instructions:

1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

1. To verify that a drug is sufficiently safe and effective to be tested in humans is a purpose of pre-clinical testing.

- A. True
- B. False

2. On what does Phase I clinical testing test?

- A. Animal subjects
- B. **Healthy human volunteers**
- C. People with the target disease/condition
- D. Large-scale tests in people with the target disease/population

3. What is a synonym for the Phase 4 trials?

- A. **Post Marketing Surveillance**
- B. Pre Marketing Surveillance
- C. Pre FDA Approval
- D. Post FDA Approval

4. Chromatographic Data Analysis is related to effective workflow within a

- A. Drug store
- B. Clinic
- C. **Laboratory**
- D. Hospital

5. In chromatography, the stationary phase can be _____ supported on a solid.

- A. **Solid or liquid**
- B. Liquid or gas
- C. Solid only
- D. Liquid only

6. The visual output of chromatography is called?

- A. Chromatograph
- B. **Chromatogram**
- C. Electropherogram
- D. Autoradiogram

7. Chromatography is used to separate

- A. Molecule
- B. Solution
- C. Atoms
- D. Mixture

8. TIMS is based on

- A. Search Queries
- B. Select Queries
- C. **Both**
- D. None of the above

9. Laboratory information systems (LIS) are used to help manage medical laboratories. Which of the following best describes the function of medical laboratory?

- A. A place to perform surgical procedure
- B. **A place to draw, examine, and store human specimen samples**
- C. A place to fit people for Health
- D. A place to perform physical assessments on patients

10. is mainly use by scientist as a report template to facilitate report writing

- A. **TIMS**
- B. LIMS
- C. CDA
- D. None of the above



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11. Benefits of TMS –
- A. Save time and Energy
 - B. Faster report Generation
 - C. Reduced paperwork
 - D. **All of the above**
12. Example of Chromatographic software
- A. Chromeleon 7.2 CDS
 - B. Class VP (Shimadzu Scientific Inst.)
 - C. Empower (Waters Co.)
 - D. **All of the above**
13. Bioinformatics analyze various types of biological, and genetic data.
- A. Basic
 - B. Atomic
 - C. **Molecular**
 - D. Physical
14. Bioinformatics help in discovery of in a more effective way.
- A. Drugs
 - B. Medicines
 - C. **Vaccines**
 - D. Diagnosis
15. Biochemist are trying to find some answers like -
- A. How DNA is formed? And what is exact composition of DNA?
 - B. How does a protein bind to another protein?
 - C. How DNA cause genetic disorders and how they can be prevented?
 - D. **All of the above**
16. refers to the complete set of genes or genetic material present in a cell or organism
- A. **Genomics**
 - B. Proteomics
 - C. Phenotype
 - D. Biostatistics
17. databases are also called as archival database
- A. Composite
 - B. **Primary**
 - C. Secondary
 - D. Tertiary
18. Gen bank database maintained by the
- A. National Center for Biological Information
 - B. **National Center for Biotechnology Information**
 - C. National Center for Genome Information
 - D. National Center for Genetic Information
19. Stepwise method to solving the problem in computer science is called as....
- A. Flow Chart
 - B. Sequential design
 - C. Procedure
 - D. **Algorithm**
20. The term used to refer something Perform on computer or computer simulation
- A. Dry Lab
 - B. Wet Lab
 - C. In Vitro
 - D. **In silico**
21. The computational methodology that try to find out the best matching between two molecules, a receptor and ligand is called ...
- F. Molecular matching
 - G. **Molecular docking**
 - H. Molecular fitting
 - I. Molecular checking
22. is located at the National Institute of Genetics (NIG) in the Shizuoka prefecture of Japan.
- A. **DDBJ**
 - B. EMBL
 - C. SWISS PROT
 - D. Genbank



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23. In the database, the protein sequence patterns are stored as 'fingerprints'

- A. Genbank
- B. PROSIT
- C. BLOCK
- D. **PRINT**

24. The genomic study can be tentatively divided into

- A. Structural genomics
- B. Functional genomics
- C. **Both**
- D. None of the above

25. Is a Marriage between computer science and Molecular Biology.

Ans- Bioinformatics

26. Popular database for web systems-

- A. MYSQL
- B. MS-ACCESS
- C. ORACLE
- D. **All of the above**

27. The Database is a collection of inter-related data which is used to retrieve, insert and delete the data efficiently.

- A. **True**
- B. False

28. Example of Pharmacy drug database –

- A. Dynamed
- B. LactMed
- C. Essential Evidence Plus
- D. **All of the above**

29. Table, Relationship, Queries, Forms, Reports, Macros, Module are the components of MS Access

- A. **True**
- B. False

30. SQL stands for

- A. Structured Quantity Language
- B. Structured Quality Language
- C. Structured Query Language
- D. None of the above



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Online Second Sessional Theory Examination 2020-2021
(EVEN SEM)

Subject & Subject Code: Medicinal Chemistry-I (BP402T)

Day & Date: Tuesday 29-06-2021

Class: S.Y. B. Pharmacy

Semester: IV

Time: 10.30 AM to 12.00 PM

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. The compound 1-Methyl-5,5-diethyl barbituric acid is_____.
 - a) Short acting barbiturates
 - b) Long acting barbiturates
 - c) Intermediate acting barbiturates
 - d) Ultra Short acting barbity
2. Alprazolam contains _____.
 - a) Pyrrole ring
 - b) Furan ring
 - c) Triazole ring
 - d) Imidazole ring
3. Antiepileptic is from oxazolidine-dione class_____.
 - a) Phenobarbital
 - b) Phenytoin
 - c) Diazepam
 - d) Trimethadione
4. Antipsychotic drug is_____.
 - a) Doxepin
 - b) Fluoxetine
 - c) Clozapine
 - d) All
5. Haloperidol acts on which receptor?
 - a) Adrenaline
 - b) Glutamate
 - c) Dopamine
 - d) Non adrenergic receptor
6. The similarity between Enflurane and Desflurane is :
 - a) Both have ether bridge
 - b) Both have 4 carbon atoms
 - c) Both have Chloro atoms
 - d) Both have one "H" atom.
7. IUPAC name of Diclfenac _____.
 - a) 2-(2-(2,6-dichlorophenylamino)phenyl)propionic acid
 - b) 2-(2-(2,6-trichlorophenylamino)phenyl)acetic acid
 - c) 2-(2-(2,6-dichlorophenylamino)phenyl)acetic acid
 - d) 2-(2-(2,6-dichlorophenylamino)phenyl)propionic acid



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8. Chemically aspirin is _____.
 - a) Acetyl Salicylic acid
 - b) Para-Amino benzoic acid
 - c) Para-Amino Salicylic acid
 - d) Acetaminophen
9. Which of the following is an opioid antagonist?
 - a) Codeine
 - b) Methadone
 - c) Fentanyl
 - d) Naloxone
10. Methoxy derivative of morphine is known as?
 - a) Heroin
 - b) Codeine
 - c) Naltrexone
 - d) Thebaine

QII Long Answers (Answer any 1 out of 2)

10

1. Classify the drug used in convulsive seizure and draw the chemical structure of one important compound from each class. Discuss SAR of Benzodiazepine.
2. Write a note on following
 - a) SAR of Morphine b) SAR of Phenothiazine

QIII Short Answers (Answer any 2 out of 3)

10

1. Give mechanism of action and SAR of atropine sulphate.
2. Classify the account of the drug used as a General Anaesthetics.
3. Give the classification of Non-Steroidal Anti-inflammatory Drugs.(Draw the one chemical structure from each class)

Subject: Pharmacognosy & Phytochemistry-I

Day & Date: Saturday, 27 April, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 10.30 am -12.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory

2. Draw a well labeled diagram/ Structures wherever necessary

3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. An explant is
 - a) Excised piece of tissue or organ used for culture
 - b) An organ meant for respiration
 - c) A secondary metabolite
 - d) None of above
2. The word Ayurveda means:
 - a) Health of people
 - b) Science of drugs
 - c) Science of life
 - d) None of above
3. Cotton Consist of hairs of the seeds of:
 - a) *Cyamopsis tetragonolobus*
 - b) *Arachis hypogaea*
 - c) *Gossypium barbadense*
 - d) *Saraca indica*
4. Urokinase is isolated from:
 - a) Human Urine
 - b) Human saliva
 - c) Human faeces
 - d) Human lungs
5. Mayer's reagent is composed of:
 - a) Potassium mercuric iodide
 - b) Potassium Tri iodide
 - c) Picric acid
 - d) Potassium bismuth iodide
6. Which of the following alkaloid is red is colour?
 - a) Morphine
 - b) Quinine
 - c) Betanidin
 - d) berberine
7. Japanese Isinglass is also known as:-
 - a) Tragacanth
 - b) Gelatin
 - c) Agar
 - d) Acacia
8. Cera-flava is also known as:-
 - a) Castor oil
 - b) Honey
 - c) Bees wax
 - d) Gelatin
9. Which one of the following can cause a birth defect?
 - a) Hallucinogens
 - b) Plant allergens
 - c) Teratogens
 - d) Marine toxins
10. Piperidine alkaloids biosynthetically derived from:-
 - a) Ornithine
 - b) Lysine
 - c) Tryptophan
 - d) Anthracene

QII Long Answers (Answer any 1 out of 2)

10

1. Define and classify Alkaloids. Describe in details properties and identification test of alkaloids
2. Define Plant Tissue culture. Explain in brief about protoplast culture and enlist the applications of Plant Tissue Culture in Pharmacognosy

QIII Short Answers (Answer any 2 out of 3)

10

1. Write a note on Ayurvedic system of medicine
2. Write a note on anticancer and antiviral drugs of marine origin
3. Write Biological source, chemical constituents and uses of any two drugs:
 - a) Serratiopeptidase
 - b) Gelatin
 - c) Cotton
 - d) Agar and e) Castor oil



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Second Sessional Theory Examination 2020-2021
(EVEN SEM)

Subject & Subject Code: Pharmacognosy & Phytochemistry I (BP405T)

Day & Date: Friday, 2nd July 2021

Class: S. Y. B. Pharm

Semester: IV

Time: 10.30 am to 12.00 pm

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- The process of formation of unorganized tissues from organized tissues is known as
(a) Organogenesis (b) Re-differentiation (c) Dedifferentiation (d) Differentiation
- Protoplast culture is prepared by _____
(a) Mechanical method (b) Enzymatic method (c) Both (d) None of the above
- "Kapha" composed of
(a) Water and earth (b) Fire and water (c) Air and water (d) Air and earth
- Flavonoids are detected by _____
(a) Shinoda test (b) Modified Borntrager test (c) Borntrager test (d) Raymond test
- When alkaloids are reacted with mercuric iodide it forms _____ colored precipitate
(a) Yellow (b) Orange (c) White (d) Red
- Vitali Morin test is used to detect presence of _____ alkaloids
(a) Indole (b) Isoquinoline (c) Tropane (d) Purine
- Structural formula of flavonoid is
(a) C3-C-C3 (b) C3-C-C6 (c) C6-C3-C6 (d) C6-C3
- Gelatin is obtained from _____
(a) Bos taurus (b) Sus scrofa (c) Both (d) None of the above



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9. Cuoxam reagent is composed of

- (a) Ammoniacal copper sulphate (b) Ammoniacal copper nitrate
(c) Ammoniacal copper oxide (d) Alkaline copper oxide

10. Which of the following is anti HIV agent from marine source

- (a) Avarol and Avarones (b) Sinularin (c) Chondriol (d) Cartap

QII Long Answers (Answer any 1 out of 2)

10

1. Define and classify Glycosides with example. Write the physical & chemical properties. Explain test for identification of cardiac and saponin glycosides.

2. Write source, chemistry, preparation and uses of Gelatin and Papain.

QIII Short Answers (Answer any 2 out of 3)

10

1. Write biological source chemical constituents and uses of

- A) Honey
B) Castor oil

2. Define & Classify tannins. Write any two chemical test for tannins.

3. Write a note on **(any one)**

- a) Edible vaccine
b) Natural allergens

*****All The Best*****

Shri. Vile Parle Kelavani Mandal's

Institute of Pharmacy, Dhule

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

Second Sessional Theory Examination 2018-2019

Subject: Pharmacology - I

Day & Date: 26.04.2019, Friday

Class: S.Y. B. Pharm

Semester: IV

Time: 10.30 am to 12.00 noon

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks*

QI Short Answer Question (Solve any Five)

10

1. Classify antiepileptic drugs with suitable examples.
2. Barbiturate poisoning.
3. Alcohol metabolism.
4. Preanaesthetic medication.
5. Classify antidepressant drugs with suitable examples.
6. Classify antipsychotic drugs with suitable examples.
7. Define glaucoma and pheochromocytoma.

QII Long Answers (Answer any 1 out of 2)

10

1. Classify cholinergic receptors. Write the synthesis, storage, release and metabolism of acetylcholine.
2. Define sympatholytic agents. Classify β -blockers with suitable examples. Explain in detail pharmacological actions, ADR and therapeutic uses of β -blockers.

QIII Short Answers (Answer any 2 out of 3)

10

1. Classify sedative hypnotics. Explain MOA, pharmacological actions, ADR and therapeutic uses of diazepam.
2. Classify antiparkinsonian drugs. Write the pharmacotherapy of Parkinson's disease.
3. Pharmacotherapy of myasthenia gravis.

Subject: POC-III (BP401T)

Day & Date: Monday, 22 April, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 10.30 am -12.00 pm

Max. Marks: 30

- Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram/ Structures wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Clemensens reduction of ketones carried out in presence of
a) H_2 as catalyst b) $LiAlH_4$ c) $Zn-Hg/HCl$ d) $NaBH_4$
- Dakin's reaction is used to synthesis of
a) Alcohols. b) Aldehydes. c) Phenols. d) Carboxylic acid
- Beckman's rearrangement is used for synthesis of
a) Amide b) phenols. c) alcohols d) oximes
- Pyridine shows electrophilic substitution reaction at.
a) 1st position b) 2nd position c) 3rd position d) at any position
- Which of the following is correct.
a) Pyrrole is weak base b) Pyrrole is weak acid c) strong base than pyridine d) both a and b
- Electrophilic substitution reaction in furan usually occurs at.
a) 1st position b) 5th position c) 2nd position d) 3rd position
- Reactivity order of followings towards electrophile?
a) Furan>thiophene>pyrrole c) thiophene>pyrrole>furan
b) Pyrrole>furan>thiophene d) thiophene>furan>pyrrole
- Thiophene is-
a) More reactive than furan c) S atom contribute 2π electrons to ring
b) aromatic in nature d) both b and c
- Nitration of Quinoline in presence of HNO_3 and con. H_2SO_4 gives
a) 5-nitro quinoline b) 3-nitro quinoline c) 2-nitro quinoline d) reaction does not occurs
- Mixture of Acetylene and ammonia pass through red hot tube gives
a) Pyrrole b) pyrazole c) pyrimidine d) pyridine

QII Long Answers (Answer any 1 out of 2)

10

- Give Synthesis, chemical reaction and medicinal uses of pyrrole.
- Explain 1) Metal hydride reduction ($LiAlH_4$ and $NaBH_4$)
2) Claisen-Schimidth condensation reaction.

QIII Short Answers (Answer any 2 out of 3)

10

- Explain Basicity of Pyridine.
- Give the chemical reactions and medicinal uses indole.
- Explain Birch reduction with mechanism.



Shri Vile Parle Kelavani Mandal's
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Second Sessional Theory Examination 2020-2021
(EVEN SEM)

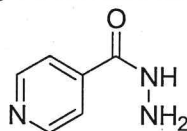
Subject & Subject Code: POC III BP401T **Day & Date:** Monday 28/06/2021
Class: Second Year B Pharmacy **Semester:** IV
Time: 10.30 am to 12.00 pm **Max. Marks:** 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

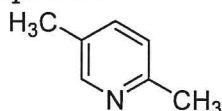
- The suffix used for 7 member ring is
a) -ine b) -tidine c) -ole d) -epine
- Beckmann Rearrangement is useful for the synthesis of
a) Phenol b) Oxime c) Amide d) Alcohol
- The electrophilic substitution reaction in indole preferentially goes to
a) 4 b) 3 c) 7 d) 2
- The basic ring present in following structure is



Isoniazide

- a) Pyridine b) Pyrole c) Furan d) Thiophene
- The following reaction is an example of _____

a) Wolf Kishner Reduction b) Perkin Condensation
c) Birch Reduction d) Pinacol rearrangement
 - _____ is used to convert an aldehyde or ketone to an alkane using hydrazine, base and thermal condition
a) Wolf Kishner reduction b) Curtis rearrangement
c) Birch reduction d) Perkin Condensation
 - The example of oxidizing agents is/are
a) KMnO4 b) K2Cr2O7 c) Iodine d) All of the above
 - The IUPAC name of following compound



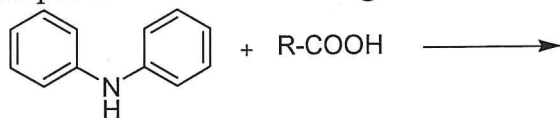
- a) 2,5-Dimethyl pyridine b) 2,5-Dimethyl pipridine
c) 3,6- Dimethyl pyridine d) 3,6- Dimethyl pipridine



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9. What will be product in the following reaction



- a) Purine b) Quinoline c) Acridine d) Isoquinoline

10. _____ is the process of conversion of secondary alcohols to ketone by selective oxidation.

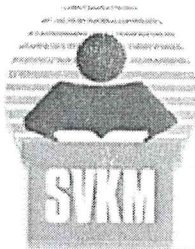
- a) Dakin reaction b) Oppenauer-oxidation
c) Beckmann Reaction d) Schmidt reaction

QII Long Answers (Answer any 1 out of 2) 10

1. Write down the reaction, mechanism and synthetic applications of Clemmenson reduction?
2. Give the synthesis, reactions and medicinal uses of Indole?

QIII Short Answers (Answer any 2 out of 3) 10

1. Write down the synthesis & medicinal uses of Quinoline
2. Write short note on Beckmann rearrangement?
3. a) Enlist the synthetic routes and reactions of Imidazole?
b) Write down the reaction and mechanism of Oppenauer-oxidation?



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examiop@svkm.ac.in

Second Sessional Theory Examination 2020-2021
(EVEN SEM)

Subject & Code: Physical Pharmaceutics-II (BP403T)

Max. Marks : 30

Class: S. Y. B. Pharmacy

Semester : IV

Time: 10.30 – 12.00 pm

Day & Date: Wednesday, 30/06/2021

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10 Marks

1. is the irreversible type of colloids?
 - A. Lyophilic colloids
 - B. Lyophobic colloids
 - C. Association colloids
 - D. Hydrophilic colloids
2. The potential difference develop when particles settle under the influence of gravity is called
 - A. Streaming Potential
 - B. Sedimentation Potential
 - C. Reduction Potential
 - D. Oxidation Potential
3. The ratio of stress to strain is called
 - A. Poissoin Ratio
 - B. Young Modulus
 - C. Shear Strain
 - D. Elastic Modulus
4. Accelerated stability testing is done to
 - A. Predict Shelf life of the formulation
 - B. Predict dissociation constant
 - C. Predict diffusion constant
 - D. Determine activation energy
5. The protective ability of colloids is measured as.....
 - A. Gold Number
 - B. Streaming potential
 - C. Zeta potential
 - D. None of the above

6. A drug suspension decomposes by zero-order kinetics with a rate constant of $2 \text{ mg mL}^{-1} \text{ month}^{-1}$. If the initial concentration is 100 mg mL^{-1} , what is the shelf life?
 - A. 5 months
 - B. 4 months
 - C. 3 months
 - D. 2 months
7. When the distance between the particles are large, the particles experience attractive force and aggregates are formed. This is known as
 - A. Primary minimum
 - B. Potential Barrier
 - C. Secondary minimum
 - D. Interparticle distance
8. The unit of specific reaction rate constant for second order reaction is
 - A. $\text{Litre Moles}^{-1} \text{ Second}^{-2}$
 - B. Second^{-1}
 - C. $\text{Litre Moles}^{-1} \text{ Second}^{-1}$
 - D. $\text{Moles Litre}^{-1} \text{ Second}^{-1}$
9. Dry gum method is also known as
 - A. English Method
 - B. Bottle method
 - C. Continental method
 - D. Forbe's method
10. The density of the dispersed phase is more than that of the dispersion medium. According to Stoke's equation, the creaming is:
 - A. At the center of emulsion
 - B. In both the directions
 - C. In upward direction
 - D. In downward direction

QII Long Answers (Answer any 1 out of 2)

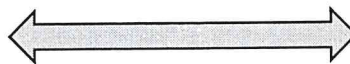
10 Marks

1. What are Colloidal dispersion? Classify Colloids & compare their general properties. Discuss in detail kinetic properties of Colloid systems.
2. What are zero order reactions? Give suitable examples. Deduce an equation for determining the specific reaction rate constant for zero order kinetics.

QIII Short Answers (Answer any 2 out of 3)

10 Marks

1. Differentiate between Plastic & Elastic deformation. Add a note on Heckel equation.
2. Define emulsion. Explain in detail the theories of emulsification and add a note on stability of emulsion and preservation.
3. Differentiate between flocculated & deflocculated suspensions and explain the concept of controlled flocculation.



Improvement Remedial Sessional Theory Examination 2019-2020

Subject: POC-III (BP401T)

Day & Date: TUE, 03 Sep, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 01.30 -3.00

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram/ Structures wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

7. A molecule is said to be chiral
 - a) If it contain plain of symmetry
 - b) If it have non-superimposed mirror image
 - c) If it contains center of symmetry
 - d) All of these
8. Compare the physical properties of diastereomers
 - a) Different physical properties.
 - b) Same physical properties.
 - c) Cannot determine.
 - d) Same chemical properties.
9. Beckman's rearrangement is used for synthesis of
 - a) Amide
 - b) phenols.
 - c) alcohols
 - d) oximes
10. Pyridine shows electrophilic substitution reaction at.
 - a) 1st position
 - b) 2nd position
 - c) 3rd position
 - d) at any position
11. Which of the following is correct.
 - a) Pyrrole is weak base
 - b) Pyrrole is weak acid
 - c) strong base than pyridine
 - d) both a and b
12. Electrophilic substitution reaction in furan usually occurs at.
 - a) 1st position
 - b) 5th position
 - c) 2nd position
 - d) 3rd position
7. Reactivity order of followings towards electrophile?
 - a) Furan>thiophene>pyrrole
 - b) Pyrrole>furan>thiophene
 - c) thiophene>pyrrole>furan
 - d) thiophene>furan>pyrrole
8. Thiophene is-
 - a) More reactive than furan
 - b) aromatic in nature
 - c) S atom contribute 2 π electrons to ring
 - d) both b and c
9. The process of separation of racemic mixture is called as
 - a) Resolution
 - b) Reduction
 - c) Revolution
 - d) Racemization
10. Mixture of Acetylene and ammonia pass through red hot tube gives
 - a) Pyrrole
 - b) pyrazole
 - c) pyrimidine
 - d) pyridine

QII Long Answers (Answer any 1 out of 2)

10

1. Give Synthesis, chemical reaction and medicinal uses of pyrrole.
2. Explain 1) Metal hydride reduction (LiAlH_4 and NaBH_4)
2) Optical Activity and Optical Isomerism.

QIII Short Answers (Answer any 2 out of 3)

10

1. Explain in detail Atropisomerism.
2. Give the chemical reactions and medicinal uses indole.
3. Explain Birch reduction with mechanism.

**Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule**

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

Second Sessional Theory Examination 2018-2019

Subject: POC-III (BP401T)

Day & Date: Monday, 22 April, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 10.30 -12.00

Max. Marks: 30

Instructions: 1. All questions are compulsory

2. Draw a well labeled diagram/Structures wherever necessary

3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Clemensens reduction of ketones carried out in presence of
a) H_2 as catalyst b) $LiAlH_4$ c) $Zn-Hg/HCl$ d) $NaBH_4$
- Dakin's reaction is used to synthesis of
a) Alcohols. b) Aldehydes. c) Phenols. d) Carboxylic acid
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- Mixture of Acetylene and ammonia pass through red hot tube gives
a) Pyrrole b) pyrazole c) pyrimidine d) pyridine

QII Long Answers (Answer any 1 out of 2)

10

- Give Synthesis, chemical reaction and medicinal uses of pyrrole.
- Explain 1) Metal hydride reduction ($LiAlH_4$ and $NaBH_4$)
2) Claisen-Schimidth condensation reaction.

QIII Short Answers (Answer any 2 out of 3)

10

- Explain Basicity of Pyridine.
- Give the chemical reactions and medicinal uses indole.
- Explain Birch reduction with mechanism.

**Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule**

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

Second Sessional Theory Examination 2018-2019

Subject: POC-III (BP401T)

Day & Date: Monday, 22 April, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 10.30 -12.00

Max. Marks: 30

Instructions: 1. All questions are compulsory

2. Draw a well labeled diagram/Structures wherever necessary

3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Clemensens reduction of ketones carried out in presence of
a) H_2 as catalyst b) $LiAlH_4$ c) Zn-Hg/ HCL d) $NaBH_4$
- Dakin's reaction is used to synthesis of
a) Alcohols. b) Aldehydes. c) Phenols. d) Carboxylic acid
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a) More reactive than furan c) S atom contribute 2π electrons to ring
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- Nitration of Quinoline in presence of HNO_3 and con. H_2SO_4 gives
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- Mixture of Acetylene and ammonia pass through red hot tube gives
a) Pyrrole b) pyrazole c) pyrimidine d) pyridine

QII Long Answers (Answer any 1 out of 2)

10

- Give Synthesis, chemical reaction and medicinal uses of pyrrole.
- Explain 1) Metal hydride reduction ($LiAlH_4$ and $NaBH_4$)
2) Claisen-Schimidth condensation reaction.

QIII Short Answers (Answer any 2 out of 3)

10

- Explain Basicity of Pyridine.
- Give the chemical reactions and medicinal uses indole.
- Explain Birch reduction with mechanism.



Shri. Vile Parle Kelavani Mandal's
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Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

Second Sessional Theory Examination 2018-2019

Subject : Medicinal Chemistry I Day & Date : 24/04/2019, WED
Class : S. Y. B. Pharmacy Semester : IV
Time : 10.30 am to 12.00 pm Max. Marks : 30

*Instructions: 1. All questions are compulsory
2. Draw a well labelled diagram wherever necessary
3. Right hand side number indicates full marks*

Q.1 Multiple Choice Questions

[10]

- 1 Aspirin is
 - a. Salicylic acid derivative
 - b. P-amino phenol derivative
 - c. Pyrazole derivative
 - d. Anthranillic acid derivative
- 2 Agent used in dissociative Anaesthesia is
 - a. Halothane
 - b. Thiomytal sodium
 - c. Fentanyl citrate
 - d. Ketamine
- 3is an example of dihydroindolones derivative
 - a. Haloperidol
 - b. Molindone Hydrochloride
 - c. Risperidone
 - d. Perphenazine
- 4 What is the proportion of different stages of sleep in normal adult
 - a. 15-20% NREM & 80-85% REM
 - b. 15-20% NREM & 80-85% Wakefulness
 - c. 75-80% REM & 20-25% NREM
 - d. 75-80% NREM & 20-25% REM
- 5 5,5-diphenylhydantoin is a common name of
 - a. Barbituric acid
 - b. Tropane
 - c. Phenytoin
 - d. Procaine
- 6 Which of the following are ganglionic blocking agents
 - a. Hexamethonium
 - b. Curare alkaloids
 - c. Tetraethyl ammonium chloride
 - d. All of the above
- 7 Membrane phospholipids $\xrightarrow{?}$ arachidonic acid
 - a. Cyclooxygenase
 - b. Lipoxygenase
 - c. Phospholipase A2
 - d. All of the above
- 8 In the pharmacophore of acetylcholine the distance between site 1 & site 2 is-
 - a. 1 Carbon Chain
 - b. 2 Carbon Chain
 - c. 3 Carbon chain
 - d. 4 Carbon Chain
- 9 Location of M₃ Receptor is
 - a. SA node
 - b. Visceral Smooth muscles
 - c. Autonomic Ganglia
 - d. In CNS
- 10 In which of the following pathway Dopamine is transmitted from VTA to Frontal Cortex
 - a. Mesolimbic pathway
 - b. Mesostriatal pathway
 - c. Tuberoinfundibular pathway
 - d. Mesocortical pathway

Q.2 Answer the following short questions (any one)

[10]

- 1 What is psychosis? Give the classification of antipsychotics. Explain the **SAR** of Phenothiazine's with suitable example.
- 2 Define Cholinergic agents. Give the brief Classification of cholinergic agents and highlight the **SAR** of Parasympathomimetic agents

Q.3 Answer in detail of following (any Two)

[10]

1. Define General Anaesthetics and Write SAR of Halothane (Halogenated Anaesthetic)
2. Give the difference between sedatives and hypnotics with suitable example and outline the synthesis of Diazepam with its IUPAC Name
3. Write the structural difference between barbiturates and Hydantoin and give the synthesis of Phenytoin
4. What do you mean by parasympatholytic agents? Add a note on Solanaceous alkaloids. Give the mode of action of anticholinergic agents



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Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

Second Sessional Theory Examination 2018-2019

Subject: Pharmacognosy & Phytochemistry-I

Day & Date: Saturday, 27 April, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 10.30 am -12.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory

2. Draw a well labeled diagram/ Structures wherever necessary

3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. An explant is
 - a) Excised piece of tissue or organ used for culture
 - b) An organ meant for respiration
 - c) A secondary metabolite
 - d) None of above
2. The word Ayurveda means:
 - a) Health of people
 - b) Science of drugs
 - c) Science of life
 - d) None of above
3. Cotton Consist of hairs of the seeds of:
 - a) *Cyamopsis tetragonolobus*
 - b) *Arachis hypogaea*
 - c) *Gossypium barbadense*
 - d) *Saraca indica*
4. Urokinase is isolated from:
 - a) Human Urine
 - b) Human saliva
 - c) Human faeces
 - d) Human lungs
5. Mayer's reagent is composed of:
 - a) Potassium mercuric iodide
 - b) Potassium Tri iodide
 - c) Picric acid
 - d) Potassium bismuth iodide
6. Which of the following alkaloid is red is colour?
 - a) Morphine
 - b) Quinine
 - c) Betanidin
 - d) berberine
7. Japanese Isinglass is also known as:-
 - a) Tragacanth
 - b) Gelatin
 - c) Agar
 - d) Acacia
8. Cera-flava is also known as:-
 - a) Castor oil
 - b) Honey
 - c) Bees wax
 - d) Gelatin
9. Which one of the following can cause a birth defect?
 - a) Hallucinogens
 - b) Plant allergens
 - c) Teratogens
 - d) Marine toxins
10. Piperidine alkaloids biosynthetically derived from:-
 - a) Ornithine
 - b) Lysine
 - c) Tryptophan
 - d) Anthracene

QII Long Answers (Answer any 1 out of 2)

10

1. Define and classify Alkaloids. Describe in details properties and identification test of alkaloids
2. Define Plant Tissue culture. Explain in brief about protoplast culture and enlist the applications of Plant Tissue Culture in Pharmacognosy

QIII Short Answers (Answer any 2 out of 3)

10

1. Write a note on Ayurvedic system of medicine
2. Write a note on anticancer and antiviral drugs of marine origin
3. Write Biological source, chemical constituents and uses of any two drugs:
 - a) Serratiopeptidase
 - b) Gelatin
 - c) Cotton,
 - d) Agar and
 - e) Castor oil

**Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule**

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

Second Sessional Theory Examination 2018-2019

Subject: Pharmacognosy & Phytochemistry-I

Day & Date: Saturday, 27 April, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 10.30 am -12.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory

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QI Multiple Choice Questions (MCQs)

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 - b) Lysine
 - c) Tryptophan
 - d) Anthracene

QII Long Answers (Answer any 1 out of 2)

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2. Define Plant Tissue culture. Explain in brief about protoplast culture and enlist the applications of Plant Tissue Culture in Pharmacognosy

QIII Short Answers (Answer any 2 out of 3)

10

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2. Write a note on anticancer and antiviral drugs of marine origin
3. Write Biological source, chemical constituents and uses of any two drugs:
 - a) Serratiopeptidase
 - b) Gelatin
 - c) Cotton,
 - d) Agar and
 - e) Castor oil

**Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule**

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

Second Sessional Theory Examination 2018-2019

Subject: POC-III (BP401T)

Day & Date: Monday, 22 April, 2019

Class: S.Y.B. Pharm

Semester: IV

Time: 10.30 am -12.00 pm

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram/ Structures wherever necessary
3. Right hand side number indicates full marks*

QI Multiple Choice Questions (MCQs) 10

1. Clemensens reduction of ketones carried out in presence of
a) H_2 as catalyst b) $LiAlH_4$ c) $Zn-Hg/HCl$ d) $NaBH_4$
2. Dakin's reaction is used to synthesis of
a) Alcohols. b) Aldehydes. c) Phenols. d) Carboxylic acid
3. Beckman's rearrangement is used for synthesis of
a) Amide b) phenols. c) alcohols d) oximes
4. Pyridine shows electrophilic substitution reaction at.
a) 1st position b) 2nd position c) 3rd position d) at any position
5. Which of the following is correct.
a) Pyrrole is weak base b) Pyrrole is weak acid c) strong base than pyridine d) both a and b
6. Electrophilic substitution reaction in furan usually occurs at.
a) 1st position b) 5th position c) 2nd position d) 3rd position
7. Reactivity order of followings towards electrophile?
a) Furan>thiophene>pyrrole c) thiophene>pyrrole>furan
b) Pyrrole>furan>thiophene d) thiophene>furan>pyrrole
8. Thiophene is-
a) More reactive than furan c) S atom contribute 2π electrons to ring
b) aromatic in nature d) both b and c
9. Nitration of Quinoline in presence of HNO_3 and con. H_2SO_4 gives
a) 5-nitro quinoline b) 3-nitro quinoline c) 2-nitro quinoline d) reaction does not occurs
10. Mixture of Acetylene and ammonia pass through red hot tube gives
a) Pyrrole b) pyrazole c) pyrimidine d) pyridine

QII Long Answers (Answer any 1 out of 2) 10

1. Give Synthesis, chemical reaction and medicinal uses of pyrrole.
2. Explain 1) Metal hydride reduction ($LiAlH_4$ and $NaBH_4$)
2) Claisen-Schimidth condensation reaction.

QIII Short Answers (Answer any 2 out of 3) 10

1. Explain Basicity of Pyridine.
2. Give the chemical reactions and medicinal uses indole.
3. Explain Birch reduction with mechanism.

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QII Long Answers (Answer any 1 out of 2)

10

1. Give Synthesis, chemical reaction and medicinal uses of pyrrole.
2. Explain 1) Metal hydride reduction (LiAlH_4 and NaBH_4)
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QIII Short Answers (Answer any 2 out of 3)

10

1. Explain Basicity of Pyridine.
2. Give the chemical reactions and medicinal uses indole.
3. Explain Birch reduction with mechanism.

Second Sessional Theory Examination 2018-2019

Subject: Physical Pharmaceutics-II (BP 403T)

Day & Date: Thursday, 25/04/2019

Class: S. Y. B. Pharmacy

Semester: IV

Time: 10.30 to 12.00 pm

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks*

Q1. Multiple Choice Questions (MCQs)

10 M

1. Accelerated stability testing is done to

- A. Predict Shelf life of the formulation B. Predict dissociation constant
C. Predict diffusion constant D. Determine activation energy

2. The unit of specific reaction rate constant for second order reaction is

- A. Litre Moles⁻¹ Second⁻² B. Litre Moles⁻¹ Second⁻¹
C. Second⁻¹ D. Moles Litre⁻¹ Second⁻¹

3. Helium Pycnometer is used to determine

- A. Particle Size B. Surface area C. True density D. Sedimentation rate

4. A drug suspension decomposes by zero-order kinetics with a rate constant of 2 mg mL⁻¹ month⁻¹. If the initial concentration is 100 mg mL⁻¹, what is the shelf life?

- A) 2 months B) 3 months C) 4 months D) 5 months

5. Hausner ratio is

- A. Tapped Density/Bulk density B. Bulk density/ Tapped Density
C. Bulk Density/ Void volume D. Void volume/ Bulk Density

6. In an elastic member stress is directly proportional to the strain within elastic limit is

- A. Heckel Plot B. Hookes Law C. Poisson's ratio D. Stress

7. The Distance between two tangents on opposite sides of the particle parallel to some fixed direction is

- A. Projected Area diameter B. Martin Diameter
C. Feret's diameter D. Stoke's Diameter

8. Which of the following is the identification test for emulsion

- A. Dilution Test B. Cobalt Chloride test
C. Conductivity Test D. All of the Above

9. The ratio of the ultimate volume of sediment to the actual volume of sediment before settling is called

- A. Emulsification Volume B. Phase Volume ratio
C. Sedimentation Volume D. Degree of Flocculation

10. The density of the dispersed phase is more than that of the dispersion medium. According to Stoke's equation, the creaming is:

- A. At the center of emulsion B. In both the directions
C. In downward direction D. In upward direction

Q2. Long Answers (Answer any 1 out of 2)

10 M

1. Define and give importance of Micrometrics in pharmacy. Explain methods for determining surface area.
2. Define order and molecularity of reaction and Explain in detail first order reaction.

Q3. Short Answers (Answer any 2 out of 3)

10 M

1. Explain in detail Anderson Pipette & Coulter counter method used to determine particle size.
2. Explain Hydrolysis & Oxidation of drugs with suitable examples. What are measures to be taken to prevent it?
3. Explain the concept of the use of controlled flocculation in case of flocculated suspension.

OR

Explain different theories of emulsification.

Second Sessional Theory Examination 2018-2019

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Day & Date: Thursday, 25/04/2019

Class: S. Y. B. Pharmacy

Semester: IV

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10 M

1. Explain in detail Anderson Pipette & Coulter counter method used to determine particle size.
2. Explain Hydrolysis & Oxidation of drugs with suitable examples. What are measures to be taken to prevent it?
3. Explain the concept of the use of controlled flocculation in case of flocculated suspension.

OR

Explain different theories of emulsification.



Remedial Theory Examination 2019-2020

Subject: Medicinal Chemistry-I

Class: S.Y.B .Pharm

Time: 1:30-3:00pm

Day & Date: 08-09-2019, SUN

Semester: IV

Max. Marks: 30

- Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Agent used in inhalation anesthesia is
 - Halothane
 - Thiamylal sodium
 - Fentanyl citrate
 - Ketamine
- Medicinal chemistry is a science whose roots are interlinked with-
 - Chemistry and biology
 - Chemistry and physics
 - Technology and biology
 - None of these
- Which of the following is first precursor of ARENALINE formation?
 - Tyrosine
 - Dopamine
 - DOPA
 - Nor-adrenaline
- 5'S Diphenylhydantoin is a common name of
 - Barbituric acid
 - Tropane
 - Phenytoin
 - Procaine
- What does COMT stands-
 - Catechol O-methyl transferase
 - Catecholamine O-methyl transferase
 - Catechol oxy-methyl transferase
 - Catecholamine Oxy-methyl transferase
- Glutathione is tripeptide of
 - Glutamic acid-Cysteine-Glycine
 - cysteine-glutamic acid-glycine
 - Glycine- cysteine-glutamic acid
 - glycine-glutamic acid-cysteine
- Prazocin belongs to the class of
 - Pyrdinyl Quinoxaline
 - Pyridinyl Quinazoline
 - Piprazinyl Quinazoline
 - Piprazinyl Quinoxaline
- How many carbon chain are essential for activity of propranolol?
 - 1 Carbon chain
 - 3 Carbon Chain
 - 2 Carbon chain
 - 4 Carbon Chain
- Phase II biotransformation reactions are also called as
 - Functionalization Reactions
 - Conjugation Reactions
 - True detoxification Reactions
 - Both b & c
- Which enzymes is responsible for Conversion of L-DOPA to DOPAMINE
 - B-Hydroxylase
 - Tyrosine hydroxylase
 - Tyrosine kinase
 - DOPA Decarboxylase

QII Long Answers (Answer any 1 out of 2)

10

- Explain all Physico-chemical Properties of drug action
- Define epilepsy and give the classification of antiepileptic agents and write down the SAR of hydantoin and oxazolidinediones

QIII Short Answers (Answer any 2 out of 3)

10

- Define biotransformation and write a short note on Phase I Oxidation reaction
- Explain Bioisoterism and Isosterism with example
- Define sedatives and hypnotics with suitable example and Write the SAR of benzodiazepines
- Define schizophrenia and outline the synthesis of chlorpromazine with its IUPAC Name



Remedial Theory Examination 2019 - 2020

Subject: Pharmacology - I

Day & Date: 09.09.2019, Monday

Class: S.Y. B. Pharm

Semester: IV

Time: 10.30 am to 12.00 noon

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Lipid soluble drug has following advantages
a. Low toxicity b. Rapid absorption c. Rapid Excretion d. Rapid metabolism
- If the bioavailability of a drug is 100%, it
a. Is absorbed significantly b. Is metabolized in the liver
c. Is widely distributed in the body d. Does not undergo first-pass effect
- All of drugs are enzyme inducers except
a. Phenobarbitone b. Isoniazid c. Phenylbutazone d. Ketoconazole
- Which of the following food should not be taken immediately after administration of Tetracycline -
a. Vegetables b. Meat c. Milk d. Sugar
- Agonist have
a. Affinity b. Intrinsic activity
c. Affinity and intrinsic activity d. None of the above
- Selective antagonist for M1 muscarinic acetylcholine receptor is
a. Gallamine b. Pirenzepine c. Darifenacin d. Mamba toxin
- Neostigmine is a ----- amine
a. Tertiary b. Secondary c. Quaternary e. Primary
- Commercially available atropine is -
a. d-hyoscyamine b. l-hyoscyamine c. dl-hyoscyamine d. both a & b
- Following is a hormone secreted by adrenal medulla -
a. Noradrenaline b. Adrenaline c. Isoprenaline d. Dopamine
- Selective antagonist for α_2 receptor is -
a. Clonidine b. Yohimbine c. Atenolol d. Propranolol

QII Long Answers (Answer any 1 out of 2)

10

- Define and classify receptors with suitable example. Explain about G-protein coupled receptors.
- Define sympatholytic agents. Classify β -blockers with suitable examples. Explain in detail pharmacological actions, ADR and therapeutic uses of β -blockers.

QIII Short Answers (Answer any 2 out of 3)

10

- Explain about glucuronide conjugation and acetylation process of metabolism of drug.
- Classify antiparkinsonian drugs. Write the pharmacotherapy of Parkinson's disease.
- Classify sedative hypnotics. Explain MOA, pharmacological actions, ADR and therapeutic uses of diazepam.



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Remedial Sessional Theory Examination 2019-2020

Subject: Physical Pharmaceutics-II (BP 403T)	Day & Date: Friday, 06/09/2019
Class: S. Y. B. Pharmacy	Semester: IV
Time: 4.00 to 5.30 pm	Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

Q1. Multiple Choice Questions (MCQs)

10 M

1. Fluidity is
A. Reciprocal of density B. Reciprocal of surface tension
C. Reciprocal of volume D. Reciprocal of viscosity
2. The potential difference develop when particles settle under the influence of gravity is called.....
A. Streaming potential B. Oxidation potential
C. Reduction potential D. Sedimentation potential
3. The change in velocity between two planes of liquid which is separated by distance is
A. Rate of shear B. Shearing stress C. Strain D. Yield value
4. The protective ability of colloids is measured as.....
A. Zeta potential B. Streaming potential
C. Gold number D. None of the above
5. According to Schulze-Hardy rule the precipitation power increases rapidly with the.....
A. Presence of valence or charge of the ions, B. Lowering the interfacial tension
C. Decreasing the freezing point, D. Elevation of boiling point
6. Accelerated stability testing is done to
A. Predict Shelf life of the formulation B. Predict dissociation constant
C. Predict diffusion constant D. Determine activation energy
7. Hausner ratio is
A. Tapped Density/Bulk density B. Bulk density/ Tapped Density
C. Bulk Density/ Void volume D. Void volume/ Bulk Density
8. Helium Pycnometer is used to determine
A. Particle Size, B. Surface area, C. True density, D. Sedimentation rate
9. The density of the dispersed phase is more than that of the dispersion medium. According to Stoke's equation, the creaming is:
A. At the center of emulsion B. In both the directions
C. In downward direction D. In upward direction
10. In an elastic member stress is directly proportional to the strain within elastic limit is
A. Heckel Plot, B. Hookes Law, C. Poisson's ratio, D. Stress

Q2. Long Answers (Answer any 1 out of 2)

10 M

1. Discuss Kinetic properties of colloids.
2. Explain different theories of emulsification.

Q3. Short Answers (Answer any 2 out of 3)

10 M

1. Explain the concept of DLVO theory. How this theory is applied for stabilizing the colloidal dispersion.
2. Explain the concept of the use of controlled flocculation in case of flocculated suspension.
3. Explain Newtonian and non-newtonian flow system with suitable examples.



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Second Sessional Theory Examination 2018-2019

Subject: Pharmacology - I

Day & Date: 26.04.2019, Friday

Class: S.Y. B. Pharm

Semester: IV

Time: 10.30 am to 12.00 noon

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Short Answer Question (Solve any Five)

10

1. Classify antiepileptic drugs with suitable examples.
2. Barbiturate poisoning.
3. Alcohol metabolism.
4. Preanaesthetic medication.
5. Classify antidepressant drugs with suitable examples.
6. Classify antipsychotic drugs with suitable examples.
7. Define glaucoma and pheochromocytoma.

QII Long Answers (Answer any 1 out of 2)

10

1. Classify cholinergic receptors. Write the synthesis, storage, release and metabolism of acetylcholine.
2. Define sympatholytic agents. Classify β -blockers with suitable examples. Explain in detail pharmacological actions, ADR and therapeutic uses of β -blockers.

QIII Short Answers (Answer any 2 out of 3)

10

1. Classify sedative hypnotics. Explain MOA, pharmacological actions, ADR and therapeutic uses of diazepam.
2. Classify antiparkinsonian drugs. Write the pharmacotherapy of Parkinson's disease.
3. Pharmacotherapy of myasthenia gravis.