



हिमालयन भेषजी रि

स्वामी राम हिमालयन विश्वविद्यालय की

Himalayan School of Pharmaceutical Sciences

A Constituent Academic Unit of Swami Rama Himalayan University



Roll No. _____

Date: _____

B. Pharm. – 4th Semester

First Sessional Theory Examination (2025)

Subject Code: BP401T

Subject Name: Pharmaceutical Organic Chemistry-III

Time: 1.5 Hours

Total Marks: 30

Part	Q. No		Marks	CO	BT Level
A		Attempt all questions	10		
	1.	Define Chirality.	1	3	1
	2.	For a compound to be chiral, all the symmetry elements must be..... [Present/Absent]	1	3	2
	3.	Define Specific Angle of Rotation. Write its formula and the units of the physical quantities involved.	1	3	1
	4.	Write any two differences between Enantiomers and Diastereomers.	1	3	2
	5.	DL configuration is and RS configuration is [Absolute/Relative]	1	3	1
	6.	Define Geometrical Isomerism with example. Write the full form of E and Z in EZ type Geometrical Isomerism.	1	3	1
	7.	Write the name of most stable and most unstable conformer of Ethane and cyclohexane (with no angle strain).	1	3	2
	8.	Give an example of Atropisomerism.	1	3	1
	9.	Give an example of Metal Hydride Reducing agent.	1	5	1
	10.	Give an example of Clemmensen Reduction.	1	5	1
B		Attempt any one question	10		
	1.	Explain Metal Hydride Reduction in detail with suitable examples.	10	5	2
	2.	Explain Geometrical Isomerism in detail. Elaborate the difference between Cis and Trans isomers. Write about EZ isomerism with suitable examples.	10	3	2
C		Attempt any two questions	10		
	1.	Explain Clemmensen Reduction and its mechanism.	5	5	2
	2.	Define Atropisomerism and explain stereoisomerism of biphenyls.	5	3	2
	3.	Write a note on Stereospecific and Stereoselective reactions	5	3	1

BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 –Evaluating, 6 – Creating)



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Date: _____

B. Pharm. – 4th Semester
Sessional Theory Examination (2025)

Subject Code: BP402T

Subject Name: Medicinal Chemistry-I

Time: 1.5 Hours

Total Marks: 30

Part	Q. No		Marks	CO	BT Level
A		Attempt all questions	10		
	1.	Define Medicinal Chemistry.	1	1	1
	2.	Define Partition Coefficient.	1	1	1
	3.	Partition Coefficient is measured in terms of..... value	1	1	1
	4.	Which step is the rate determining step in the biosynthesis of catecholamines?	1	1	2
	5.	Name two enzymes which play major role in the metabolism of catecholamines.	1	1	1
	6.	Define Bioisosterism with example.	1	1	1
	7.	Name any two reactions of Phase-I and Phase-II metabolism.	1	1	1
	8.	Name any two factors affecting drug metabolism.	1	1	1
	9.	Give any two actions of each alpha and beta receptors.	1	2	1
	10.	 is a neurotransmitter whereas is a hormone [Adrenaline/ Noredrenaline]	1	2	2
B		Attempt any one question	10		
	1.	Write SAR of adrenergic agonists and SAR of beta blockers.	10	5	2
	2.	Write the synthesis of Phenylephrine, Salbutamol, Tolazoline, Proprenolol, Biosynthesis of Adrenaline.	10	4	2
C		Attempt any two questions	10		
	1.	Explain various Physicochemical properties affecting drug action.	5	1	2
	2.	Write the classification of Beta Blockers with their structures.	5	2	1
	3.	Draw the structures of: Adrenaline, Noradrenaline, Salbutamol, Propranolol, Atenolol	5	2	1

3L – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 –Evaluating, 6 Creating)



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B. Pharm. —4th Semester

First Sessional Theory Examination (2025)

Subject Code: BP 404T

Subject Name: Pharmacology I

Time: 1.5 Hours

Total Marks: 30

Part	Q. No		Marks	CO	BL
A		Define the following. Attempt all questions.	10		
	1.	Drug	1	2	1,2
	2.	Receptor	1	2,3	1,2
	3.	Agonist	1	2	1,2
	4.	Antagonist	1	2	1,2
	5.	Adverse effect	1	2	1,2
	6.	Prodrug	1	2,3	1,2
	7.	Therapeutic Index	1	2,3	1,2
	8.	Addiction	1	2,3	1,2
	9.	LD50	1	2,3	1,2
	10.	ED50	1	2,3	1,2
B		Attempt any one question	10		
	1.	Write a detail note on Route of drug administration.		2,3	2
	2.	Write a detail note on drug discovery and clinical evaluation of new drugs.		2	2
C		Attempt any two questions	10		
	1.	Give types of receptors and explain G-Protein couple Receptor.	5	2	2
	2.	Write a short note on Metabolism.	5	2,3	2
	3.	Write a short note on Combined effect of drug.	5	2,3	2



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B. Pharm. – 4th Semester

Mid-Semester (First Sessional) Examination (2024-25)

Subject Code: BP403T

Subject Name: PHYSICAL PHARMACEUTICS-II (Theory)

Time: 1.5 Hour

Total Marks: 30

Part	Q. No		Marks	CO	BL
A		Attempt all questions	10		
	1.	What is Colloidal Dispersion.	1	1	1
	2.	Write about the general characteristics of colloidal particles.	1	2	1
	3.	Write the importance of Rheology in Pharmaceutical Technology.	1	3	2
	4.	Write about the Newtonian fluid system.	1	1	2
	5.	Define the thixotropy.	1	3	1
	6.	Define the Gold Number.	1	1	1
	7.	What is Stress.	1	1	2
	8.	Define the Bulges and Spurs.	1	2	3
	9.	What is Strain.	1	1	1
	10.	Write about the Brownian Motion.	1	2	3
B		Attempt any one question	10		
	1.	Discuss about the classification of colloids Dispersions & their properties.	10	2	1
	2.	Write in details of the Viscosity and capillary Viscometer.	10	2	2
C		Attempt any two questions	10		
	1.	Write about the Plastic and elastic deformation of solids.	5	3	2
	2.	Write about the Effect of electrolytes and coacervation.	5	2	1
	3.	Write in details of the Non-Newtonian Fluid system.	5	3	2



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B. Pharm. – 4th Semester
Mid-Semester (1st Sessional) Examination (2025)

Subject Code: BP405T

Subject Name: PHARMACOGNOSY AND PHYTOCHEMISTRY-I

Time: 1.5 Hour

Part	Q. No		Total Marks: 30		
			Marks	CO	BL
A		Attempt all questions	10		
	1.	Write any two crude drug from animal source.	1	1	1
	2.	Who coined the term Pharmacognosy?	1	1	1
	3.	What do you understand by adulteration?	1	2	1&2
	4.	Write in brief about dried extract.	1	1	2
	5.	What do you understand by Pharmacognosy?	1	1	2
	6.	Write two main differences between organised and unorganised drugs.	1	1	2
	7.	Write down the application Auxin.	1	2	1
	8.	Write down the application Cytokinin	1	2	1
	9.	Define dried latex.	1	1	2
	10.	What do you understand by secondary metabolites?	1	1	2
B		Attempt any one question	10		
	1.	What do you understand by the crude drugs? and write its classification.	10	1	1&2
	2.	Write the sources of Crude drug.	10	1	1&2
C		Attempt any two questions	10		
	1.	What do you understand by lycopodium spore method?	5	2	2&3
	2.	Write in brief about Adulteration.	5	2	2&5
	3.	Write the factors influencing the cultivation of medicinal herbs	5	2	3&4

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