

Annual Examination -2023

BP- 101T	Human Anatomy and Physiology – I
Time: - 03.00 HrsMax Marks: -75	

BP- 101T Human Anatomy and Physiology - I Time: - 03.00 HrsMax Marks: -75

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Roll No									
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Note: - Attempt any five questions. All Questions CarryEqualMarks.

Roll No

Q.1 List out the mixed cranial nerves. Mention the functions of vagus nerve.

Q.2 Write about the functions of mitochondria with diagram.

Q.3Define (a) Osmosis (b) Diffusion.

Q.4 Explain the structure and functions of cardiac muscle.

Q.5 List out examples for pivot joint and hinge joint.

Q.6 Write the function of Ca++ ion in muscle contraction.

Q.7 Explain the structure location and functions of cuboidal epithelium

Note: - Attempt any five questions. All Questions Carry Equal Marks.

Q.1 List out the mixed cranial nerves. Mention the functions of vagus nerve.

Q.2 Write about the functions of mitochondria with diagram.

Q.3Define (a) Osmosis (b) Diffusion.

Q.4 Explain the structure and functions of cardiac muscle.

Q.5 List out examples for pivot joint and hinge joint.

Q.6 Write the function of Ca++ ion in muscle contraction.

Q.7 Explain the structure location and functions of cuboidal epithelium



Annual Examination -2023

BP-102T	Pharmaceutical Analysis
Time: - 03.00 HrsMax Marks: -75	
Roll No	
ROII NO	
Note: - Attempt any five questions.	All Questions Carry Equal Marks.
Q.1 Define volumetric analysis and lisanalysis.	st out the types of Volumetric
Q.2 Define accuracy and precision.	
Q.3 Write different types of errors	
Q.4 Define primary standard with exa	ample.
Q.5 Write the different sources of im	purities.

Q.6 List out the indicators used in acid base titrations.

Q.7 Explain Co-precipitation.

Q.8 List out the types of redox titrations?



Pharmaceutical Analysis	BP- 102T

Time: - 03.00 HrsMax Marks: -75

Roll No					

Note: - Attempt any five questions. All Questions Carry Equal Marks.

Q.1 Define volumetric analysis and list out the types of Volumetric analysis.

Q.2 Define accuracy and precision.

Q.3 Write different types of errors

Q.4 Define primary standard with example.

Q.5 Write the different sources of impurities.

Q.6 List out the indicators used in acid base titrations.

Q.7 Explain Co-precipitation.

Q.8 List out the types of redox titrations?



Annual Examination -2023

BP- 103T	Pharmaceutics – I

Time: - 03.00 HrsMax Marks: -75

Roll No										1
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Note: - Attempt any five questions. All Questions Carry Equal Marks.

- Q.1 Explain career opportunities for pharmacists.
- Q.2 Briefly explain the principle involved in the preparation of Eutectic mixture.
- Q.3 How do you prepare 600ml of 60% alcohol using 90% alcohol by using allegation method.
- Q.4 Define and classify powders with examples.
- Q.5 Differentiate between syrups and elixirs.
- Q.6 Differentiate between flocculated and deflocculated suspension.
- Q.7 Define therapeutic incompatibility. Explain the terms potentiation and synergism.



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BP-103T	Pharmaceutics – I

Time: - 03.00 HrsMax Marks: -75

Roll No			
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Note: - Attempt any five questions. All Questions Carry Equal Marks.

- Q.1 Explain career opportunities for pharmacists.
- Q.2 Briefly explain the principle involved in the preparation of Eutectic mixture.
- Q.3 How do you prepare 600ml of 60% alcohol using 90% alcohol by using allegation method.
- Q.4 Define and classify powders with examples.
- Q.5 Differentiate between syrups and elixirs.
- Q.6 Differentiate between flocculated and deflocculated suspension.
- Q.7 Define therapeutic incompatibility. Explain the terms potentiation and synergism.



Annual Examination -2023

BP- 104T	Pharmaceutical Inorganic Chemistry	BP-104T	Pharmaceutical Inorganic Chemistry
Time: - 03.00 HrsMax Marks: -75	5	Time: - 03.00 HrsMax Marks: -75	
Roll No		Roll No	
Note: - Attempt any five questions	s. All Questions Carry Equal Marks.	Note: - Attempt any five questions.	All Questions Carry Equal Marks.
Q.1 Define the impurity. Give two exar	mples.	Q.1 Define the impurity. Give two examp	oles.
Q.2 Write the principle involved in Lim	nit test for Sulphates	Q.2 Write the principle involved in Limit	test for Sulphates
		000 6 1 1 1 1 1 1 1	
Q.3 Define Lewis acid and Lewis base	with examples.	Q.3 Define Lewis acid and Lewis base wi	ith examples.
Q.4 Differentiate acidifier and antacid.		Q.4 Differentiate acidifier and antacid.	
O E Define eatharties Classify with eva	amalas	O. F. Dofino cathortics. Classify with exam	nlos
Q.5 Define cathartics. Classify with exa	imples.	Q.5 Define cathartics. Classify with exam	ipies.
Q.6 Explain the mechanism involved in	n cyanide poisoning	Q.6 Explain the mechanism involved in o	cyanide poisoning
Q.7 Write the method of preparation a	and uses of Ferrousgluconate	Q.7 Write the method of preparation an	duses of Ferrousgluconate
Q.7 Write the method of preparation a	and ases of refrousgraconate.	Q.7 Write the method of preparation an	a ases of refrousgracofface.
Q.8 Define antimicrobials with exampl	es.	Q.8 Define antimicrobials with examples	i.

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Annual Examination -2023

BP- 105T	Remedial Biology*

Time: - 03.00 HrsMax Marks: -75

Roll No	
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Note: - Attempt any five questions. All Questions Carry Equal Marks.

- Q.1 Describe the composition of blood and write a note on blood grouping.
- Q.2 Write about leaf modifications with examples and suitable diagrams.
- Q.3 Describe the types of recimoseInfloresCENCE
- Q.4 Describe the mechanism of breathing.
- Q.5 How are carbohydrates digested and absorbed?
- Q.6 Discuss the generation and conduction of nerve impulse.
- Q.7 Write the salient features of monera and fungi.



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Annual Examination -2023

BP- 105T	Remedial Biology*

Time: - 03.00 HrsMax Marks: -75

Roll No					

Note: - Attempt any five questions. All Questions Carry Equal Marks.

- Q.1 Describe the composition of blood and write a note on blood grouping.
- Q.2 Write about leaf modifications with examples and suitable diagrams.
- Q.3 Describe the types of recimoseInfloresCENCE
- Q.4 Describe the mechanism of breathing.
- Q.5 How are carbohydrates digested and absorbed?
- Q.6 Discuss the generation and conduction of nerve impulse.
- Q.7 Write the salient features of monera and fungi.

Annual Examination -2023

Communication Skills*

Roll No

Note: - Attempt any five questions. All questions carryequal marks

- Q. 1 Discuss in detail the various barriers of communication and its impact.
- Q. 2 Write a paragraph of 250 words on," Impact of COVID 19 on Education system in India
- Q. 3 What are the ways to overcome nervousness before an interview?
- Q. 4 Write about the non-verbal communication.
- Q. 5 Discuss the communication process in detail.
- Q.6 Explain the various communication styles.
- Q.7 How to become an Active Listener?

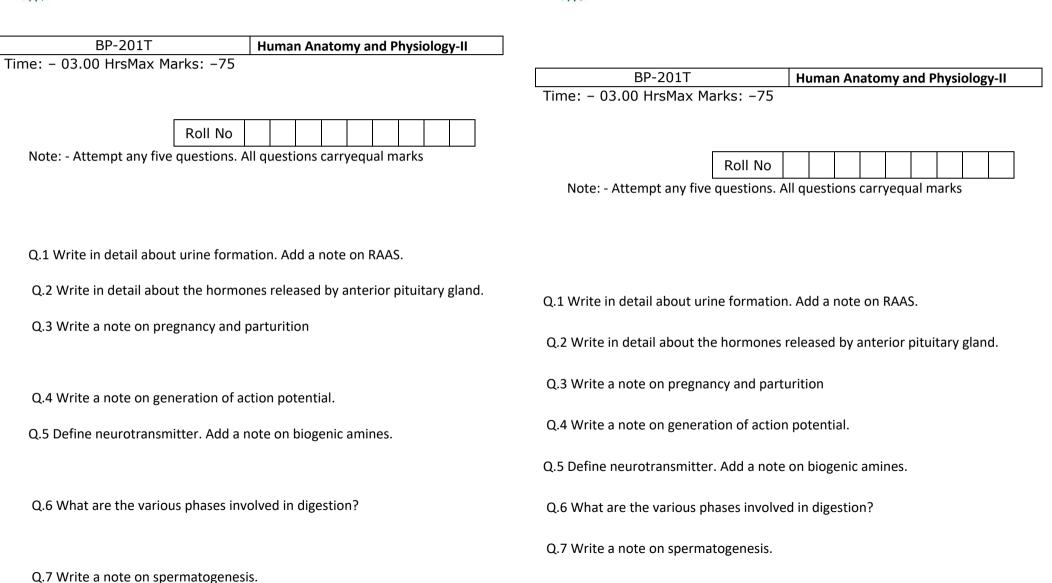
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BP-106T			Communication Skills*						
Time: – 03.00 HrsMax Ma	arks: -75								
	Roll No								
Note: - Attempt any five questions. All questions carryequal marks									
Q. 1 Discuss in detail the various barriers of communication and its impact.									
Q. 2 Write a paragraph of 250 words on," Impact of COVID 19 on Education system in India									
Q. 3 What are the ways to overcome nervousness before an interview?									
Q. 4 Write about the non-verbal communication.									
Q. 5 Discuss the communication process in detail.									
Q.6 Explain the various communication styles.									

Q.7 How to become an Active Listener?



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Annual Examination -2023

BP-202T	Pha	arm	aceı	utica	l Or	gani	c Ch	emis	stry	- I	
Time: - 03.00 HrsMax Marks: -75											
	Roll No										
Note: - Attempt any five	questions. A	ll qu	esti	ons	carr	yequ	ial m	arks	;		_
Q.1 What are alkenes? Write any one method of preparation of the same.											
Q.2 Define 'free radical'. Explain its formation with an example.											
Q.3 Explain the significance of esterification test.											
Q. 4 Write the structure and uses of chlorobutanol.											
Q. 5 Explain about Walden in version.											
Q.6 Write the structure and uses of hexamine.											
Q.7 Write the uses of amphetamine and acetylsalicylic acid.											

Q.8 Explainaldol condensation with an EXAMPLE

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Annual Examination -2023

BP-202T		Pharn	naceı	utica	l Or	gani	c Ch	emis	try -	- I
Time: - 03.00 HrsMax Marks: -75										
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F	Roll No									
Note: - Attempt any five qu	estions. A	ll quest	ions	carry	yequ	al m	arks			
Q.1 What are alkenes? Write any one method of preparation of the same.										
Q.2 Define 'free radical'. Explain its formation with an example.										
Q.3 Explain the significance of esterification test.										
Q. 4 Write the structure and us	ses of chlo	robutar	nol.							
•										
Q. 5 Explain about Walden in version.										
Q.6 Write the structure and uses of hexamine.										
Q.7 Write the uses of amphetamine and acetylsalicylic acid.										
2.7 write the uses of ampheta	iiiiie allu	acetyis	ансуі	ic ac	iu.					

Q.8 Explainaldol condensation with an EXAMPLE



Annual Examination -2023

BP- 203T	Biochemistry					
Time: - 03.00 HrsMax Marks: -75						
Roll No						
Note: - Attempt any five questions. All questions carryequal marks						
Q.1 What is amino acid and its function in human body?						
Q.2 Define Enzyme induction.						
Q.3 What are Isoenzymes& allosteric enzymes?						
Q. 4 What are essential fatty acids? Give two examples.						
Q.5 Differentiate between DNA & RNA.						
Q.6 Write a note on phenyl ketonuria.						
Q.7 Explain the deficiency of G6PD.						
Q.8 What is Ketoacidosis?.						



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Annual Examination -2023

BP- 203T	Biochemistry

Time: - 03.00 HrsMax Marks: -75

Roll No	

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 What is amino acid and its function in human body?
- Q.2 Define Enzyme induction.
- Q.3 What are Isoenzymes& allosteric enzymes?
- Q. 4 What are essential fatty acids? Give two examples.
- Q.5 Differentiate between DNA & RNA.
- Q.6 Write a note on phenyl ketonuria.
- Q.7 Explain the deficiency of G6PD.
- Q.8 What is Ketoacidosis?.



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Q.8 What is megaloblastic anaemia? Discuss its pathophysiology.

BP- 204T	Pathophysiology	BP- 204T	Pathophysiology						
 Time: – 03.00 HrsMax Mar	ks: -75	Time: - 03.00 HrsMax Marks: -75							
	Roll No	R	Roll No						
Note: - Attempt any five q	uestions. All questions carryequal marks	Note: - Attempt any five qu	Note: - Attempt any five questions. All questions carryequal marks						
Q.1 Describe pathogenesis of	depression in detail.	Q.1 Describe pathogenesis of de	Q.1 Describe pathogenesis of depression in detail.						
Q.2 Represent the pathogenes	sis of atherosclerosis with neat labelled diagram.	Q.2 Represent the pathogenesis	Q.2 Represent the pathogenesis of atherosclerosis with neat labelled diagram.						
Q.3 Explain in detail various ce	ellular events of inflammation.	Q.3 Explain in detail various cell	Q.3 Explain in detail various cellular events of inflammation.						
Q.4 Write a note on jaundice.		Q.4 Write a note on jaundice.							
Q.5 Explain the pathogenesis of	of asthma.	Q.5 Explain the pathogenesis of asthma.							
Q. 6 Discuss the pathogenesis	of tuberculosis.	Q. 6 Discuss the pathogenesis o	Q. 6 Discuss the pathogenesis of tuberculosis.						
Q.7 Write a brief note on schiz	cophrenia.	Q.7 Write a brief note on schizophrenia.							

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Q.8 What is megaloblastic anaemia? Discuss its pathophysiology.



BP- 205T

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Annual Examination -2023

Computer Application in Pharmacy



BP- 205T

Computer Application in Pharmacy

Time: - 03.00 HrsMax Marks: -75	Time: - 03.00 HrsMax Marks: -75							
Roll No	Roll No							
Note: - Attempt any five questions. All questions carryequal marks	Note: - Attempt any five questions. All questions carryequal marks							
Q.1 Define number system. Explain the conversion process from binary to decimal and hexadecimal to binary	Q.1 Define number system. Explain the conversion process from binary to decimal and hexadecimal to binary							
Q. 2 (a) Explain any 5 HTML tags with examples.(b) Explain the need of hospital and clinical pharmacy.	Q. 2 (a) Explain any 5 HTML tags with examples.(b) Explain the need of hospital and clinical pharmacy.							
Q. 3 (a) What is bioinformatics? Explain its applications.(b) Write note on CDS (Chromatographic data systems).	Q. 3 (a) What is bioinformatics? Explain its applications.(b) Write note on CDS (Chromatographic data systems).							
Q.4 Explain the concept of One's complement and Two's complements.	Q.4 Explain the concept of One's complement and Two's complements.							
Q.5 Write about syntax rules for Extensible Mark-up Language declaration.	Q.5 Write about syntax rules for Extensible Mark-up Language declaration.							
Q. 6 Write a note on web server and server products.	Q. 6 Write a note on web server and server products.							
Q.7 Explain the application of computers in Pharmacy.	Q.7 Explain the application of computers in Pharmacy.							
Q. 8 Write about Objective of Bioinformatics	Q. 8 Write about Objective of Bioinformatics							



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BP- 206T	Environmental Sciences				
Time: - 03.00 HrsMax Marks: -75					
Roll No					
Note: - Attempt any five questions. All c	questions carryequal marks				
Q.1 Explain the concept of ecosystem. G	Give the structure and functions of				
ecosystem. Briefly explain any two eco					
coosystem sherry explain any two coo	55,5.0				
Q.2 What are the causes of air pollution	n? How can we reduce air pollution?				
•	·				
Q.3 Explain the different natural resour	rces. What is the role of an individual in the				
conservation of natural resources?					
Q.4 Explain the causes of water pollution	on?				
	ources? List the environmental problems				
of some minerals.					
O 6 Evaluin the structure and functions	of forest ecosystem				
Q.6 Explain the structure and functions	of forest ecosystem.				
Q.7 Briefly explain the forest resources.					
Q.7 Briefly explain the forest resources	•				



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Annual Examination -2023

BP- 206T	Environmental Sciences

Time: - 03.00 HrsMax Marks: -75

Roll No					

Note: - Attempt any five questions. All questions carryequal marks

Q.1 Explain the concept of ecosystem. Give the structure and functions of ecosystem. Briefly explain any two ecosystems.

Q.2 What are the causes of air pollution? How can we reduce air pollution?

Q.3 Explain the different natural resources. What is the role of an individual in the conservation of natural resources?

Q.4 Explain the causes of water pollution?

Q.5 What are the different mineral resources? List the environmental problems of some minerals.

Q.6 Explain the structure and functions of forest ecosystem.

Q.7 Briefly explain the forest resources.

Q.8 Explain the various renewable resources.



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Q. 7 Explain about hydrolysis & drying of fats and oil

BP- 301T	Pharmaceutical Organic Chemistry-II	BP- 301T	Pharmaceutical Organic Chemistry-II				
Time: – 03.00 HrsMax Marks: –75		Time: - 03.00 HrsMax Marks: -75					
R	coll No	[Roll No				
Note: - Attempt any five question	ons. All questions carryequal marks	Note: - Attempt any five questions. All questions carryequal marks					
Q.1 Define the terms aromaticit rule.	y& resonance. Explain in detail about Huckel's	Q.1 Define the terms aromaticity& resonance. Explain in detail about Huckel's rule.					
Q. 2 Explain about the Hinsberg method of separation of amines.		Q. 2 Explain about the Hinsberg method of separation of amines.					
Q. 3 Write about the electrophi	ilic substitution reactions of naphthalene.	Q. 3 Write about the electrophilic substitution reactions of naphthalene.					
Q.4 Explain the mechanism involved in nitration of benzene.		Q.4 Explain the mechanism involved in nitration of benzene.					
Q.5 What are the limitations of strainless rings?	Baeyer's strain theory and explain the theory of	Q.5 What are the limitations of Baeyer's strain theory and explain the theory of strainless rings?					
Q.6 Write the decreasing order naphthalene and explain the re	of aromaticity among anthracene, benzene and ason for the same.	Q.6 Write the decreasing ordinaphthalene and explain the	der of aromaticity among anthracene, benzene and reason for the same.				

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Annual Examination -2023

Q. 7 Explain about hydrolysis & drying of fats and oils.



Annual Examination -2023

7. Write a note on (a) Changes in states of matter (b) Liquid crystals.

BP- 302T	Physical Pharmaceutics – I	BP- 302T	Physical Pharmaceutics – I				
Time: - 03.00 HrsMax Marks: -	75	Time: - 03.00 HrsMax Marks	: -75				
Roll	No	Ro	oll No				
Note: - Attempt any five questions.	All questions carryequal marks	Note: - Attempt any five questions. All questions carryequal marks					
1. Explain briefly on the following wirotation (c) Dissociation constant.	ith applications (a) Refractive index (b) Optical	1. Explain briefly on the following with applications (a) Refractive index (b) Optical rotation (c) Dissociation constant.					
2. (a) Write a note on surfactants ar determination of surface tension.	nd its applications. (b) Write the methods for	2. (a) Write a note on surfactants and its applications. (b) Write the methods for determination of surface tension.					
	ers in pharmaceutical and biological systems. c solutions. PART – C Note: Answer any seven	3. (a) Write the applications of buffers in pharmaceutical and biological systems. (b) Write a note on buffered isotonic solutions. PART – C Note: Answer any seven questions.					
4. Write briefly on factors influencing	ng on solubility of drugs.	4. Write briefly on factors influencing on solubility of drugs.					
5. Write a note on solubility of liquid	ds in liquids and gases in liquids.	5. Write a note on solubility of liquids in liquids and gases in liquids.					
6. What is Polymorphism? Write ab	out polymorphism and its importance.	6. What is Polymorphism? Write	about polymorphism and its importance.				

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Annual Examination -2023

7. Write a note on (a) Changes in states of matter (b) Liquid crystals.



Annual Examination -2023

BP- 303T	Pharmaceutical Microbiology						
Time: - 03.00 HrsMax Marks: -75							
Roll No							
Note: - Attempt any five questions. All questions carryequal marks							
Q. 1 Explain general procedures of anii	mal cell culture.						
Q. 2 Explain chemical and gaseous me	thods of Sterilization.						
Q. 3 Explain principle and procedure involved in microbiological assay of antibiotics							
Q. 4 Explain the methods of isolation of pure cultures.							
Q. 5 Explain simple staining technique.							
Q. 6 Explain about cultivation of anaerobic bacteria.							
Q. 7 Write about nutritional requirem	ents of bacteria.						



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BP- 303T		Phar	mac	euti	cal N	/licro	obiol	ogy		
Time: - 03.00 HrsMax Marks: 75										
	Roll No									
Note: - Attempt any five questions. All questions carryequal marks										
Q. 1 Explain general procedure	s of anim	al cel	l cult	ture.						
Q. 2 Explain chemical and gase	eous meth	nods (of St	eriliz	atio	n.				
Q. 3 Explain principle and procantibiotics	Q. 3 Explain principle and procedure involved in microbiological assay of antibiotics									
Q. 4 Explain the methods of iso	olation of	pure	cult	ures						
Q. 5 Explain simple staining technique.										
Q. 6 Explain about cultivation of anaerobic bacteria.										
Q. 7 Write about nutritional requirements of bacteria.										



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Q.7 Write principle and procedure of determining particle size by sieve shaker..

BP- 304T	Pharmaceutical Engineering	BP- 304T	Pharmaceutical Engineering					
 Time: – 03.00 HrsMax Marks: -	-75	Time: - 03.00 HrsMax Ma	ks: -75					
Roll	No No		Roll No					
Note: - Attempt any five questions.	All questions carryequal marks	Note: - Attempt any five questions. All questions carryequal marks						
Q.1 What is Bernoulli's theorem and write its application?		Q.1 What is Bernoulli's theore	Q.1 What is Bernoulli's theorem and write its application?					
Q. 2 Write the objectives of size reduction and mention its applications.		Q. 2 Write the objectives of size reduction and mention its applications.						
Q.3 Classify mechanisms of size separation.		Q.3 Classify mechanisms of size separation.						
Q.4 Draw the diagram of steam jacketed kettle.		Q.4 Draw the diagram of steam jacketed kettle.						
Q.5 Write the significance of drying rate curve.		Q.5 Write the significance of drying rate curve.						
Q. 6 Write construction and working	ng of differential manometer.	Q. 6 Write construction and working of differential manometer.						

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Q.7 Write principle and procedure of determining particle size by sieve shaker..



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BP- 401T	Pharmaceutical Organic Chemistry – III	BP- 401T	Pharmaceutical Organic Chemistry – III					
Time: - 03.00 HrsMax Marks: -75		Time: - 03.00 HrsMax Mar	ks: -75					
	Roll No		Roll No					
Note: - Attempt any five que	estions. All questions carryequal marks	Note: - Attempt any five ques	Note: - Attempt any five questions. All questions carryequal marks					
Q.1 Give the reason for Elec	trophilic substitution at 2nd position in pyrrole	Q.1 Give the reason for Electron	ophilic substitution at 2nd position in pyrrole					
Q.2 Define geometrical ison of Nomenclature of geometric	nerism and explain the Cis-Trans/EZ/Syn Anti system rical isomers with examples.	_	Q.2 Define geometrical isomerism and explain the Cis-Trans/EZ/Syn Anti system of Nomenclature of geometrical isomers with examples.					
Q.3 Describe the mechanism Beckmann rearrangement (k	n and applications of following reactions – (a) b) Oppenauer-oxidation.		Q.3 Describe the mechanism and applications of following reactions – (a) Beckmann rearrangement (b) Oppenauer-oxidation.					
Q. 4 Write any two synthesis (b) Thiophene.	and three reactions and medicinal uses of (a) Furan	Q. 4 Write any two synthesis at (b) Thiophene.	Q. 4 Write any two synthesis and three reactions and medicinal uses of (a) Furan (b) Thiophene.					
Q.5 Explain the DL system o	f Nomenclature of stereoisom.	Q.5 Explain the DL system of	Q.5 Explain the DL system of Nomenclature of stereoisom.					
Q.6 Explain the stereo ison of optical activity.	nerism in biphenyl compounds and give the condition	Q.6 Explain the stereo isome of optical activity.	erism in biphenyl compounds and give the condition					
Q. 7 Write the mechanism in	nvolved in Wolf-Kishner reduction.	Q. 7 Write the mechanism inv	Q. 7 Write the mechanism involved in Wolf-Kishner reduction.					



BP- 402T

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Medicinal Chemistry – I

Annual Examination -2023



BP- 402T

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Medicinal Chemistry – I

Time: - 03.00 HrsMax Marks: -75	Time: - 03.00 HrsMax Marks: -75				
Roll No	Roll No				
Note: - Attempt any five questions. All questions carryequal marks	Note: - Attempt any five questions. All questions carryequal marks				
Q.1 What is partition coefficient?	Q.1 What is partition coefficient?				
Q.2 What is chelation?	Q.2 What is chelation?				
Q.3 What are the uses of barbiturates?	Q.3 What are the uses of barbiturates?				
Q.4 Write the uses of Diazepam and Phenytoin.	Q.4 Write the uses of Diazepam and Phenytoin.				
Q.5 Give the synthesis of Propranolol.	Q.5 Give the synthesis of Propranolol.				
Q. 6 Write a note on adrenergic receptors and their distribution.	Q. 6 Write a note on adrenergic receptors and their distribution.				
Q.7 Define anticonvulsants. Give two examples.	Q.7 Define anticonvulsants. Give two examples.				



BP- 403T

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Physical Pharmacoutics-II

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RP- 403T

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Physical Pharmacoutics II

BP- 4031	Physical Pharmaceutics-II	BP- 4031 Ph	ysical Pharmaceutics-II		
Time: - 03.00 HrsMax Ma	arks: -75	Time: - 03.00 HrsMax Marks: -75			
]	Roll No	Roll No			
Note: - Attempt any five que	stions. All questions carryequal marks	Note: - Attempt any five questions. All ques	tions carryequal marks		
Q.1. Define and classify coars	se dispersions	Q.1. Define and classify coarse dispersions			
	a dispersions				
Q.2. What is zeta potential		Q.2. What is zeta potential			
Q.3. What are non-Newtonia	an systems	Q.3. What are non-Newtonian systems			
Q.4. What is micro emulsion		Q.4. What is micro emulsion			
Q.5. Mention factors influence	cing viscosity	Q.5. Mention factors influencing viscosity			
Q.6. Define porosity		Q.6. Define porosity			
Q.7. Define sedimentation v	olume and what is its importance	Q.7. Define sedimentation volume and wha	at is its importance		



BP- 404T

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Pharmacology - I

Time: - 03.00 HrsMax Marks: -75								
Roll No								
Note: - Attempt any five questions. All questions carryequal marks								
Q.1. Compare the merits and demerits of oral and parenteral routes of administration.								
Q.2 Differentiate enzyme induction and enzyme inhibition.								
Q.3 Write a note on various phases of clinical trials.								
Q.4 Explain about the factors modifying drug action.								
Q.5 Explain the pharmacological actions of adrenaline.								
Q.6 Define myasthenia gravis. Enlist the drugs used in its treatment.								

Q.7 Classify sedative-hypnotics with examples. Explain the mechanism of action,

adverse effects and uses of benzodiazepines



BP- 404T	Pharmacology – I											
Time: - 03.00 HrsMax Marks: -75												
Roll No												
Note: - Attempt any five questions. All questions carryequal marks												
Q.1. Compare the merits and demerits of administration.	of oral and	d par	ente	ral r	oute	es of						
Q.2 Differentiate enzyme induction and	d enzyme	inhib	ition	١.								
Q.3 Write a note on various phases of c	linical tria	als.										
Q.4 Explain about the factors modifying	g drug act	ion.										
Q.5 Explain the pharmacological action	s of adren	aline	€.									
Q.6 Define myasthenia gravis. Enlist the	e drugs us	ed in	ı its t	reat	:men	nt.						
Q.7 Classify sedative-hypnotics with examples. Explain the mechanism of action adverse effects and uses of benzodiazepines												



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BP- 405T			rmac	ogn	osy a	and I	Phyt	oche	emis	try-	
Time: - 03.00 HrsMax Marks: -75									-		
	Roll No										

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 (a) Write in detail the scope and development of pharmacognosy
- (b) Write about lycopodium spore method.
- Q.2 Mention the objectives and write a detailed note on the methods adopted for the conservation of medicinal and aromatic plants.
- Q.3 Explain methods for induction of polyploidy. Elaborate the influence of polyploidy on the active constituents taking examples.
- Q.4 Write about the nutritional requirements for the growth and maintenance of plant cultures.
- Q.5 Elaborate on ideal storage conditions for crude drugs

Q.6 Write pharmacognotic note on cotton.



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Annual Examination -2023

BP	- 405T	Pharmacognosy and Phytochemistry-
		1

Time: - 03.00 HrsMax Marks: -75

Roll No				

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 (a) Write in detail the scope and development of pharmacognosy
- (b) Write about lycopodium spore method.
- Q.2 Mention the objectives and write a detailed note on the methods adopted for the conservation of medicinal and aromatic plants.
- Q.3 Explain methods for induction of polyploidy. Elaborate the influence of polyploidy on the active constituents taking examples.
- Q.4 Write about the nutritional requirements for the growth and maintenance of plant cultures.
- Q.5 Elaborate on ideal storage conditions for crude drugs
- Q.6 Write pharmacognotic note on cotton.



hydrochloride.

OPJS UNIVERSITY CHURU

Annual Examination -2023

BP- 501T	Medicinal Chemistry – II										
Time: - 03.00 HrsMax Marks: -75											
Roll No											
Note: - Attempt any five questions. All o	questions carryequal marks										
Q.1 (a) What are H2-antagonists? Outl	ine the synthesis of cimetidine.										
Q.2 Classify anti-neoplastic agents with	two structures from each class.										
0.3 (a) Explain the mechanism of action	n of anti-arrhythmic drugs with examples.										
Q.5 (a) Explain the mechanism of action	Tot anti-arriytimic drugs with examples.										
Q.4 Outline the synthesis of chlorothia	zide and furosemide.										
0.5 (a) Classify oral hypoglycomic drug	Q.5 (a) Classify oral hypoglycemic drugs with one structure from each class.										
Q.3 (a) Classify of all Hypogrycerific drug	s with one structure from each class.										
Q.6 Discuss SAR of local anesthetics.											

Q.7 Outline the synthesis of Diphenhydramine hydrochloride and promethazine

hydrochloride.

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BP- 501T	Medicinal Chemistry – II										
Time: - 03.00 HrsMax Marks: -75											
Poll No.											
L	Roll No										
Note: - Attempt any five questions. All questions carryequal marks											
Q.1 (a) What are H2-antagon	ists? Outli	ine th	e syı	nthe	sis o	f cim	netid	line.			
Q.2 Classify anti-neoplastic ag	ents with	two	struc	ture	s fro	m e	ach (class			
Q.3 (a) Explain the mechanism	of action	of ar	nti-ar	rhyt	hmid	dru	ıgs w	/ith e	exam	ples.	
Q.4 Outline the synthesis of o	hlorothia	zide a	nd f	uros	emi	de.					
Q.5 (a) Classify oral hypoglyco	emic drug	s with	n one	e str	uctui	re fr	om e	each	class	5.	
Q.6 Discuss SAR of local anes	thetics.										
Q.7 Outline the synthesis of I	Diphenhyo	drami	ne h	ydro	chlo	ride	and	pror	meth	azine	



BP- 502T

Formulativepharmacy



Formulativepharmacy

Time: - 03.00 HrsMax Marks: -75	Time: - 03.00 HrsMax Marks: -75								
Roll No	Roll No								
Note: - Attempt any five questions. All questions carryequal marks	Note: - Attempt any five questions. All questions carryequal marks								
Q.1 (a) Discuss about crystallinity of solid substances.	Q.1 (a) Discuss about crystallinity of solid substances.								
Q.2 Describe the chemical reactions involved in degradation of API.	Q.2 Describe the chemical reactions involved in degradation of API.								
Q.3 Explain in detail about manufacturing of hard gelatin capsules and soft gelatin capsules.	Q.3 Explain in detail about manufacturing of hard gelatin capsules and soft gelatin capsules.								
Q.4 (a) Describe the components of aerosol system with the help of a neat diagram.	Q.4 (a) Describe the components of aerosol system with the help of a neat diagram.								
Q.5 Discuss the types of aerosol system.	Q.5 Discuss the types of aerosol system.								
Q.6 Explain the techniques for solubilization of API.	Q.6 Explain the techniques for solubilization of API.								
Q.7 Discuss the steps involved in sugar coating of tablets.	Q.7 Discuss the steps involved in sugar coating of tablets.								

BP- 502T



BP- 503T

Time: - 03.00 HrsMax Marks: -75

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Pharmacology – II

Annual Examination -2023

Roll No								
Note: - Attempt any five questions. All questions carryequal marks								
Q. 1 Explain the various methods of bioassay of insulin and digitalis.								
Q. 2 (a) Classify the non-steroidal anti-inflammatory agents with examples.								
Q. 3 Explain the mechanism of action, uses and adverse effects of salicylates.								
Q. 4 (a) What is congestive heart failure? Classify the drugs used for its treatment.								
Q. 5 Explain the mechanism of action, adverse drug reactions and uses of digoxin.								
Q. 6 Write short notes on pharmacology vitamin B12.								
Q. 7 Classify anticoagulants. Mention the pharmacological actions of heparin.								

OPJS UNIVERSITY CHURU Annual Examination -2023

BP- 503T	Pharmacology – II												
Time: - 03.00 HrsMax Marks: -75													
Doll No.													
Roll No													
Note: - Attempt any five questions. All questions carryequal marks													
Q. 1 Explain the various methods of bio	oassay of insulin and digitalis.												
Q. 2 (a) Classify the non-steroidal anti-	inflammatory agents with examples.												
Q. 3 Explain the mechanism of action, uses and adverse effects of salicylates.													
Q. 4 (a) What is congestive heart failur	re? Classify the drugs used for its treatmen												
Q. 5 Explain the mechanism of action,	adverse drug reactions and uses of digoxin												
Q. 6 Write short notes on pharmacolog	gy vitamin B12.												

Q. 7 Classify anticoagulants. Mention the pharmacological actions of heparin.



BP- 504T

Time: - 03.00 HrsMax Marks: -75

Q7 Give the method of estimation for sennoside.

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Annual Examination -2023

Roll No

Note: - Attempt any five questions. All questions carryequal marks

Pharmacognosy&Phytochemistry-II

Q1 Explain in detail the biosynthesis of any one secondary metabolite through acetate mevalonate pathway.
Q. 2 Explain in detail method of isolation, identification and analysis of reserpine
Q. 3 Write a note on various chromatographic techniques used in identification and purification of phytoconstituents.
Q.4. Explain Shikimic acid pathway.
Q.5 What are alkaloids? Give general method of isolation for alkaloids.
Q.6 Write a note on method of isolation and identification of podophylotoxin.



BP- 504T

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Pharmacognosy&Phytochemistry-II

Annual Examination -2023

			-0	, .	•		,	
ime: – 03.00 HrsMax Ma	arks: -75							
	Roll No							

Note: - Attempt any five questions. All questions carryequal marks

- 1. Explain in detail the biosynthesis of any one secondary metabolite through acetate mevalonate pathway.
- 2. Explain in detail method of isolation, identification and analysis of reserpine.
- 3. Write a note on various chromatographic techniques used in identification and purification of phytoconstituents.
- 4. Explain Shikimic acid pathway.
- 5. What are alkaloids? Give general method of isolation for alkaloids.
- 6. Write a note on method of isolation and identification of podophylotoxin.
- 7. Give the method of estimation for sennoside.



Annual Examination -2023

BP- 505T	Pharmaceutical Jurisprudence
Time: - 03.00 HrsMax Marks: -75	
Roll No	

Note: - Attempt any five questions. All questions carryequal marks

- Q1.Describe schedule M with regard to requirements for manufacturing of a drug.
- Q.2 Describe the salient features, prohibited advertisements, exempted advertisements of drugs as per magic remedies act.
- Q. 3 Explain in detail about pharmaceutical ethics
- Q.4 What are the requirements for manufacture of schedule X drugs?
- Q. 5 Describe the classes of drugs and cosmetic prohibited from import according to D & C Act.
- Q. 6 Describe wholesale, retail and restricted licenses for sale of drugs.
- Q. 7 Write the constitution and responsibility of drug technical advisory board.



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Annual Examination -2023

BP- 505T	Pharmaceutical Jurisprudence
Time: - 03.00 HrsMax Marks: -75	
Roll No.	

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 Describe schedule M with regard to requirements for manufacturing of a drug.
- Q. 2 Describe the salient features, prohibited advertisements, exempted advertisements of drugs as per magic remedies act.
- Q.3 Explain in detail about pharmaceutical ethics
- Q. 4 What are the requirements for manufacture of schedule X drugs?
- Q.5 Describe the classes of drugs and cosmetic prohibited from import according to D & C Act.
- Q. 6 Describe wholesale, retail and restricted licenses for sale of drugs.
- Q.7 Write the constitution and responsibility of drug technical advisory board.



BP- 601T

OPJS UNIVERSITY CHURU

Annual Examination -2023

Time: - 03.00 HrsMax Marks: -75	Time: - 03.00 HrsMax Mark
Roll No	
Note: - Attempt any five questions. All questions carryequal marks	Note: - Attempt any five questi
Q.1 Write the synthesis, mechanism of action and uses of Metronidazole.	Q.1 Write the synthesis, mecha
Q.2 Mention any six Quinoline drugs.	Q.2 Mention any six Quinoline
Q.3 What are Monobactams? Give examples with one structure.	Q.3 What are Monobactams?
Q.4 Mention any six ant tubercular agents.	Q.4 Mention any six ant tubero
Q.5 Write about the chemical degradation of Penicillins.	Q.5 Write about the chemical of
Q.6 Mention any six antiviral drugs.	Q.6 Mention any six antiviral d
Q.7 What is Cotrimoxazole? Give its uses.	Q.7 What is Cotrimoxazole? Gi

Medicinal Chemistry – III



OPJS UNIVERSITY CHURU

		_			
BP-601T	Medicinal Chemistry – III				
Time: - 03.00 HrsMax Marks: -7	5				
Roll No					
Note: - Attempt any five questions. Al	l questions carryequal marks				
Q.1 Write the synthesis, mechanism o	of action and uses of Metronidazole.				
Q.2 Mention any six Quinoline drugs.					
Q.3 What are Monobactams? Give ex	camples with one structure.				
Q.4 Mention any six ant tubercular ag	gents.				
Q.5 Write about the chemical degradation of Penicillins.					
Q.6 Mention any six antiviral drugs.					
Q.7 What is Cotrimoxazole? Give its uses.					



BP- 602T

OPJS UNIVERSITY CHURU

Annual Examination -2023

Pharmacology-III

Time: - 03.00 HrsMax Marks: -75				
Roll No				
Note: - Attempt any five questions. All questions carryequal marks				
Q.1 Write short notes on the pharmacology of H2 receptor blockers.				
Q.2 Explain the MOA and adverse effects of tetracyclines and penicillins.				
Q.3 Explain the general principles of treatment of poisoning.				
Q.4 Classify antifungal agents and write the MOA and adverse effects of amphotericin B.				
Q.5 Write short note on immunostimulants.				
Q.6 Write about the treatment for urinary tract infections.				
Q.7 Define toxicology and explain the types of toxicity studies.				



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BP- 602T		Phar	mac	olog	gy-III					_
Time: - 03.00 HrsMax Ma	arks: -75									_
[Roll No									
Note: - Attempt any five que	stions. All c	questic	ons	carry	/equ	al m	arks			
Q.1 Write short notes on the	Q.1 Write short notes on the pharmacology of H2 receptor blockers.									
Q.2 Explain the MOA and adverse effects of tetracyclines and penicillins.							s.			
Q.3 Explain the general principles of treatment of poisoning.										
Q.4 Classify antifungal agents and write the MOA and adverse effects of amphotericin B.										
Q.5 Write short note on immunostimulants.										
Q.6 Write about the treatment for urinary tract infections.										
Q.7 Define toxicology and ex	xplain the t	ypes o	of to	xicit	y stu	dies				



Annual Examination -2023

BP- 603T	Herbal Drug Technology					
Time: - 03.00 HrsMax Marks: -75	·					
Roll No						
Note: - Attempt any five questions. All	questions carryequal marks					
Q.1 Write an elaborate note on proces	Q.1 Write an elaborate note on processing of herbal raw materials.					
Q.2 Explain in detail about the scope and type of Nutraceutical products available market.						
Q.3 Discuss WHO and ICH guidelines for the assessments of herbal drugs						
Q.4 Explain the sources of herbs.						
Q.5 Write a brief note on organic farming.						
Q.6 Write a note on herb drug interact	cions with suitable exaples.					

Q.7 Explain about the side effects and interactions of Hypericum and Kava -Kava.



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Annual Examination -2023

BP- 603T		Herl	bal	Dru	g Te	chn	olo	gy		
Time: - 03.00 HrsMax Marks: -75)									
Roll No										

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 Write an elaborate note on processing of herbal raw materials.
- Q.2 Explain in detail about the scope and type of Nutraceutical products available market.
- Q.3 Discuss WHO and ICH guidelines for the assessments of herbal drugs
- Q.4 Explain the sources of herbs.
- Q.5 Write a brief note on organic farming.
- Q.6 Write a note on herb drug interactions with suitable exaples.
- Q.7 Explain about the side effects and interactions of Hypericum and Kava -Kava.



Annual Examination -2023

BP- 604T	Bio pharmaceutics and Pharmacokinetics				
Time: - 03.00 HrsMax Marks: -75					
Roll No					
Note: - Attempt any five questions. All	questions carryequal marks				
Q.1 Describe factors influencing absorption of drugs.					
Q.2 Describe renal excretion of drugs.					
Q.3Discuss about pH -partition hypothesis.					
Q.4 Describe the absorption of drugs from extravascular routes.					
Q.5 Explain briefly about Kinetics of protein binding.					
Q6 Explain biliary excretion of drugs.					
Q.7 Discuss about methods to enhance bioavailability of poorly soluble drugs.					



BP- 604T	Bio pharmaceutics and
	Pharmacokinetics

Time: - 03.00 HrsMax Marks: -75

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 Describe factors influencing absorption of drugs.
- Q.2 Describe renal excretion of drugs.
- Q.3Discuss about pH -partition hypothesis.
- Q.4 Describe the absorption of drugs from extravascular routes.
- Q.5 Explain briefly about Kinetics of protein binding.
- Q6 Explain biliary excretion of drugs.
- Q.7 Discuss about methods to enhance bioavailability of poorly soluble drugs.



BP- 605T	Pharmaceutical Biotechnology				
Time: - 03.00 HrsMax Marks: -75					
Roll No					
Note: - Attempt any five questions. All questions carryequal marks					
Q.1Define the following: i) Biotechnology ii) Enzyme immobilization					
Q.2 Write the components of Biosensors					
Q.3 Write significance of enzyme acting on DNA i) Restriction end nucleases ii) S1 nuclease					
Q.4 Enumerate types of cloning vectors. Add a note on COSMID as vector					
Q.5 What is active immunity?					
Q.6 Write stability tests defined for official vaccines					
Q.7 Give applications involved in Southern blotting technique					
Q.8 How will you transfer gene by conjugation method					



BP- 605T	Pha	rmad	euti	cal E	Biote	chn	olog	У				
Time: - 03.00 HrsMax Ma	arks: -75											
	Roll No											
Note: - Attempt any five questions. All questions carryequal marks												
Q.1Define the following: i) Biotechnology ii) Enzyme immobilization												
Q.2 Write the components of Biosensors												
Q.3 Write significance of enzyme acting on DNA i) Restriction end nucleases ii) S1 nuclease												
Q.4 Enumerate types of clor	ning vectors	s. Add	l a no	ote c	on CO	DSM	ID as	s vec	tor			
Q.5 What is active immunity	?											
Q.6 Write stability tests defi	ned for offi	icial v	accir	nes								
Q.7 Give applications involve	ed in South	ern b	lottii	ng te	chni	ique						
Q.8 How will you transfer gene by conjugation method												



Annual Examination -2023

BP- 606T	PHARMACEUTICALQuality Assurance										
Time: - 03.00 HrsMax Marks: -75											
Roll No	Roll No										
Note: - Attempt any five questions. All questions carryequal marks											
Q.1 What is Warehousing? Explain.											
Q.2 Explain on out of specification.											
Q.3 What is Sources of impurities? Expl	ain.										
Q.4 What is calibration. Why it should l	oe bor	ne fo	or eq	uipn	nent						
Q.5 What is SOP.? Explain.											
Q.6 Write briefly about Quality control test for secondary packing materials.											

Q.7 Define ICH. Explain about ICH Guidelines.



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Annual Examination -2023

BP- 606T		PHARMACEUTICALQuality Assurance								
Time: - 03.00 HrsMax Ma	arks: -75									
	Roll No									
Note: - Attempt any five que Q.1 What is Warehousing? E		questi	ons	carry	/equ	al m	arks			
Q.2 Explain on out of specifi	cation.									
Q.3 What is Sources of impu	ırities? Expl	ain.								
Q.4 What is calibration. Why	y it should t	oe bo	ne fo	or eq	uipn	nent				
Q.5 What is SOP.? Explain.										
Q.6 Write briefly about Qual	ity control t	test fo	or se	cond	lary	pack	ing r	mate	erials	5.

Q.7 Define ICH. Explain about ICH Guidelines.



Annual Examination -2023

BP- 701T	Instrumental Methods of Analysis

Time: - 03.00 HrsMax Marks: -75

Roll No					

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 Explain the technique of Capillary Electrophoresis.
- Q.2 Write about electronic transitions and solvent effect on absorption spectra.
- Q.3 Describe the theory involved in fluorimetric technique.
- Q.4 Explain the instrumentation of Nephelotubiodmetry.
- Q.5 Write the factors affecting vibration in IR spectroscopy.
- Q.6 Differentiate between single and multi-component analysis in UV-Vis spectroscopy with examples.
- Q.7 Explain the principle and Interference in Atomic Absorption spectroscopy.
- Q.8 (a) Write the principle involved in column chromatography.



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Annual Examination -2023

BP- 701T	Instrumental Methods of Analysis

Time: - 03.00 HrsMax Marks: -75

Roll No					

Note: - Attempt any five questions. All questions carryequal marks

- Q.1 Explain the technique of Capillary Electrophoresis.
- Q.2 Write about electronic transitions and solvent effect on absorption spectra.
- Q.3 Describe the theory involved in fluorimetric technique.
- Q.4 Explain the instrumentation of Nephelotubiodmetry.
- Q.5 Write the factors affecting vibration in IR spectroscopy.
- Q.6 Differentiate between single and multi-component analysis in UV-Vis spectroscopy with examples.
- Q.7 Explain the principle and Interference in Atomic Absorption spectroscopy.
- Q.8 (a) Write the principle involved in column chromatography



BP- 702T

OPJS UNIVERSITY CHURU

Industrial Pharmacy II

Annual Examination -2023

Time: - 03.00 HrsMax Max	arks: -75									
	Roll No									
Note: - Attempt any five questions. All questions carryequal marks										
and the same of the same of the same	9				,, -					

- Q. 1 (a) Write the General considerations for pilot plant and scale up.
- (b) Write a note on platform technology.
- Q.2 (a) Write a note on six sigma concept.
 - (b) Write a note on ISO 14000.
- Q. 3 (a) Discuss Regulatory requirements and approval procedures for New Drugs.
 - (b) Write the responsibilities of State Licensing authorities.
- Q. 4 Explain the procedure for pilot plat scale-up for semisolid dosage forms.
- Q. 5 What is technology transfer? Write general principles of Technology Transfer.
- Q.6 Write the role and responsibility of regulatory affairs professionals.
- Q.7 Write a note on technology transfer agencies in India.?



BP- 702T	Industrial Pharmacy II											
Time: - 03.00 HrsMax Marks: -75												
Roll No												
Note: - Attempt any five questions. All questions carryequal marks												
Q. 1 (a) Write the General considerations for pilot plant and scale up.(b) Write a note on platform technology.												
Q.2 (a) Write a note on six sigma concept. (b) Write a note on ISO 14000.												
Q. 3 (a) Discuss Regulatory requirement (b) Write the responsibilities of Sta	ts and approval procedures for New Drugs ite Licensing authorities.											
Q. 4 Explain the procedure for pilot plat	scale-up for semisolid dosage forms.											
Q. 5 What is technology transfer? Write	general principles of Technology Transfer											
Q.6 Write the role and responsibility of	regulatory affairs professionals.											
Q.7 Write a note on technology transfe	r agencies in India.?											



Annual Examination -2023

BP- 703T	Pha	rmac	cy Pr	actio	ce						
Time: - 03.00 HrsMax Marks: -75											
Roll No											
Note: - Attempt any five questions. All questions carryequal marks											
Q.1 Describe different types of drug interactions. Add a note on reporting and management of ADR											
Q.2 Describe organisation, structure, type and design of wholesale and community pharmacy outlet											
Q.3 Explain different types of drug distribution system in a hospital. What do you mean by satellite pharmacy?											
Q.4 Define hospital formulary. What are the contents of hospital formulary? What is the difference between hospital formulary and essential drugs list?											
Q.5Explain the role of pharmacist in im highlight few counselling barriers.	provi	ng m	edic	atio	n ad	here	nce a	and			
Q.6 Describe schedule N of drugs and co	osme	tics a	ict ru	ıles	1945	j.					
O 7 Describe the policies of pharmacy	and tl	nerai	aeuti	ור רח	mmi	ttee					



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Annual Examination -2023

BP- 703T	Pharmacy Practice										
Time: - 03.00 HrsMax Marks: -75											
Roll No											
Note: - Attempt any five questions. All questions carryequal marks											
Q.1 Describe different types of drug interactions. Add a note on reporting and management of ADR											
Q.2 Describe organisation, structure, type and design of wholesale and community pharmacy outlet											
Q.3 Explain different types of drug distr mean by satellite pharmacy?	ribution system in a hospital. What do you										
Q.4 Define hospital formulary. What are the contents of hospital formulary? What is the difference between hospital formulary and essential drugs list?											
Q.5Explain the role of pharmacist in improving medication adherence and highlight few counselling barriers.											

Q.6 Describe schedule N of drugs and cosmetics act rules 1945.

Q.7 Describe the policies of pharmacy and therapeutic committee.



Annual Examination -2023

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WAHTE	

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BP- 704T	Novel Drug Delivery Systems	BP- 704T Novel Drug Delivery Systems					
Time: - 03.00 HrsMax Marks: -7	75	Time: - 03.00 HrsMax Marks: -75					
Roll N	No No	Roll No					
Note: - Attempt any five questions. A	All questions carryequal marks	Note: - Attempt any five questions. All questions carryequal marks					
Q.1 Write the advantages and disadv system.	vantages of gastroretentive drug delivery	Q.1 Write the advantages and disadvantages of gastroretentive drug delivery system.					
Q.2Explain various coating materials	s used in microencapsulation.	Q.2Explain various coating materials used in microencapsulation.					
Q.3Write a note on transmucosal pe	ermeability.	Q.3Write a note on transmucosal permeability.					
Q.4What is floating time and floating	g lag time.	Q.4What is floating time and floating lag time.					
Q.5 Write the applications of monoc	clonal antibodies.	Q.5 Write the applications of monoclonal antibodies.					
Q.6Compare and contrast liposomes	s and niosomes.	Q.6Compare and contrast liposomes and niosomes.					
Q.7Explain in detail physiochemical release formulation	and biological factors affecting controlled	Q.7Explain in detail physiochemical and biological factors affecting controlled release formulation					



Annual Examination -2023

BP- 751T	BIOSTATISTICS AND RESEARCH				
	METHODOLOGY				

Roll No					

METHODOLOGY Time: - 03.00 HrsMax Marks: -75 Time: - 03.00 HrsMax Marks: -75

BP- 751T

Note: - Attempt any five questions. All questions carryequal marks

Q.1 Explain correlation, types of correlation and its applications.

Q.2 Discuss different methods of sampling.

Q.3. Explain null hypothesis, type I and type II errors.

Q.4Explain types of observational study designs.

Q.5 Explain with examples- Histogram, Pie chart.

Q.6Discuss the applications of SPSS and MINITAB in data analysis.

Q.7 Explain the concept of Central Composite Design.

Note: - Attempt any five questions. All questions carryequal marks

Roll No

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Annual Examination -2023

BIOSTATISTICS AND RESEARCH

Q.1 Explain correlation, types of correlation and its applications.

Q.2 Discuss different methods of sampling.

Q.3. Explain null hypothesis, type I and type II errors.

Q.4Explain types of observational study designs.

Q.5 Explain with examples- Histogram, Pie chart.

Q.6Discuss the applications of SPSS and MINITAB in data analysis.

Q.7 Explain the concept of Central Composite Design.



BP- 802T

Time: - 03.00 HrsMax Marks: -75

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Annual Examination -2023

SOCIAL AND PREVENTIVE

PHARMACY

Roll No
Note: - Attempt any five questions. All questions carryequal marks
Q.1Dengue.
Q.2 Concept of Prevention and control of disease
Q.3 Food in relation to nutrition & health.
Q.4 National urban health mission.
Q.5 AIDS control programme.
Q.6 Cancer.
Q.7 National Tobacco Control Programme.
Q.8 Cholera.

BP- 802T

Time: - 03.00 HrsMax Marks: -75

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PHARMACY

SOCIAL AND PREVENTIVE



BP- 803T

OPJS UNIVERSITY CHURU

PHARMA MARKETING

Annual Examination -2023

	MANAG	EME	NT					
Time: - 03.00 HrsMax Marks: -75								
Roll No								
Note: - Attempt any five questions. All questions carryequal marks								
Q.1 Explain nature and scope of pharmaceutical marketing.								
Q.2 Briefly explain the stages involved in market research.								
Q.3What are the factors to be considered in pricing of pharmaceutical products?								
Q.4 Mention the advantage and disadvantage of a wholesaler in distribution of Pharmaceutical product.								
Q.5 Discuss the promotional strategies for OTC products.								
Q.6 Explain strategies used during introductory stage of PLC.								
Q.7 What is product mix?								



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Annual Examination -2023

BP- 803T	PHARMA MARKETING
	MANAGEMENT
Time: - 03.00 HrsMax Marks: -75	

Note: - Attempt any five questions. All questions carryequal marks

Roll No

Q.1 Explain nature and scope of pharmaceutical marketing.

Q.2 Briefly explain the stages involved in market research.

Q.3What are the factors to be considered in pricing of pharmaceutical products?

Q.4 Mention the advantage and disadvantage of a wholesaler in distribution of Pharmaceutical product.

Q.5 Discuss the promotional strategies for OTC products.

Q.6 Explain strategies used during introductory stage of PLC.

Q.7 What is product mix?



BP- 804T

Q.4 Explain the Drug Master File.

NDA.

Q.5Explain the Common Technical Document.

Q.7Explain the regulatory authorities of Australia.

OPJS UNIVERSITY CHURU

SCIENCES

PHARMACEUTICAL REGULATORY

Annual Examination -2023

Time: - 03.00 HrsMax Marks: -75									
	Roll No								
Note: - Attempt any five que	stions All a	ιιρςti	ions	carr	/eari	al m	arks		
Note: - Attempt any five que	stions. An q	uest	0113	carry	/equ	ai iii	aiks		
O 1 Europain the males and responsibilities of the respulatory outleast.									
Q.1 Explain the roles and responsibilities of the regulatory authority.									
Q.2 Explain the Orange Book features.									

Q.3 Explain the informed consent process & procedure involved in clinical trials.

Q.6 Explain the approval process for implementing the changes to an approved



NDA.

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Annual Examination -2023

BP- 804T	PHARMACEUTICAL REGULATORY SCIENCES					
Time: - 03.00 HrsMax Marks: -75						
Roll No						
Note: - Attempt any five questions. All questions carryequal marks						
Q.1 Explain the roles and responsibilities of the regulatory authority.						
Q.2 Explain the Orange Book features.						
Q.3 Explain the informed consent process & procedure involved in clinical trials.						
Q.4 Explain the Drug Master File.						
Q.5Explain the Common Technical Document.						

Q.6 Explain the approval process for implementing the changes to an approved

Q.7Explain the regulatory authorities of Australia.



BP- 805T

OPJS UNIVERSITY CHURU

PHARMACOVIGILANCE

Annual Examination -2023

Time: – 03.00 HrsMax Marks: –75						
Roll No						
Note: - Attempt any five questions. All questions carryequal marks						
Q.1Various types of Drug Information Resources.						
Q.2 Explain the Post Marketing Trials.						
Q.3Why CIOMS are important within Pharmacovigilance Work.						
Q.4 Pharmacovigilance Planning.						
Q.5Eudravigilance						
Q.6Why Pharmacovigilance is needed?						
Q.7Safety Data Management.						



OPJS UNIVERSITY CHURU

BP- 805T	PHARMACOVIGILANCE					
B1 0031	THAMMACOVIGILANCE					
Time: - 03.00 HrsMax Marks: -807	75					
Roll No						
Note: - Attempt any five questions. All o	questions carryequal marks					
Q.1Various types of Drug Information R	esources.					
Q.2 Explain the Post Marketing Trials.						
Q.3Why CIOMS are important within Pharmacovigilance Work.						
Q.4 Pharmacovigilance Planning.						
Q.5Eudravigilance						
Q.6Why Pharmacovigilance is needed?						
Q.7Safety Data Management.						



BP- 806T

Q.5 Enumerate various aspects of GLP.

herbal drugs

OPJS UNIVERSITY CHURU

Annual Examination -2023

OLIALITY CONTROL AND

DP- 6001	STANDARDIZATION OF HERBALS
Time: - 03.00 HrsMax Marks: -75	
Roll No	
Note: - Attempt any five questions. All o	questions carryequal marks
Q.1 Explain the various herbal pharmac	copoeias.
Q.2 Write the GMP requirement for he	rbal medicine.
Q.3 Explain the preparation of docume	nt for new drug application.
Q.4 Discuss the protocol for clinical guid	delines in herbal medicine.

Q.6 Write the applications of chromatography technique its standardization of

Q.7 Write briefly about stability studies of herbal medicinal products.



BP- 8061	STANDARDIZATION OF HERBALS
Time: - 03.00 HrsMax Marks: -75	

Note: - Attempt any five questions. All questions carryequal marks

Roll No

Q.1 Explain the various herbal pharmacopoeias.

Q.2 Write the GMP requirement for herbal medicine.

Q.3 Explain the preparation of document for new drug application.

Q.4 Discuss the protocol for clinical guidelines in herbal medicine.

Q.5 Enumerate various aspects of GLP.

Q.6 Write the applications of chromatography technique its standardization of herbal drugs

Q.7 Write briefly about stability studies of herbal medicinal products.