

Branch	Bachelor of Pharmacy	
Subject Name	Pharmaceutical Jurisprudence	
Program	B.PHARMACY	
Semester	5TH	
Year	2022/Odd	
Time: 3 Hour	• Start writing from 2nd page onwards; don't write on the 1st Page Backside	
Max. Marks : 75	• Answer all Questions of Section A (Compulsory)	
	• Answer Any Two out of Three of Section B	
	• Answer Any Seven out of Nine of Section C	
	• Possession of Mobile Phones or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u> .	
Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing K5 : Evaluating K6 : Creating

Section A
All the Questions are **COMPULSORY**

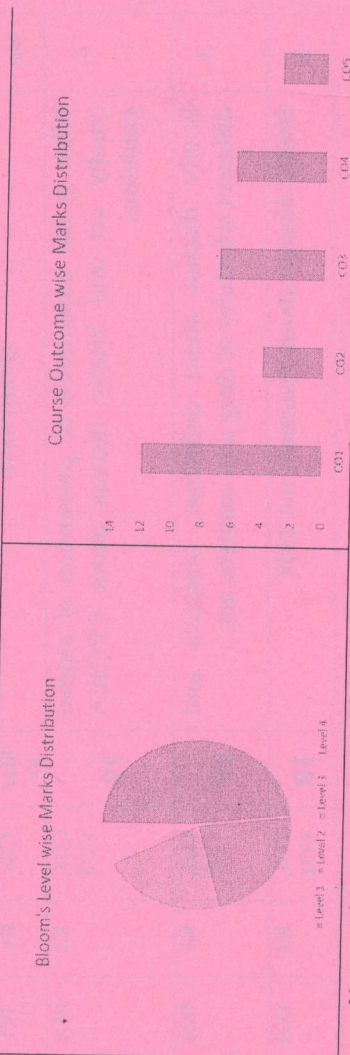
Short Answer type Question

Q. N	QUESTIONS	Marks	COs	KL	PO
Q.1					
i	Animal welfare board of India constituted under the prevention to animal act situated in: a. Chennai b. Ranchi c. Kolkata d. Delhi	1	CO1	K1	PO1
ii	The medical termination of pregnancy act was pass in which year? a. 1980 b. 1971 c. 1590 d. 1580	1	CO1, CO2	K1	PO1
iii	Central register is maintained by: a. Central council b. State pharmacy council c. None of the above d. All	1	CO1, CO2	K1	PO1
iv	Schedule P as per drug and cosmetic act deal with which property of a drug a. API in drug b. Life period of the drug c. None of the above d. All	1	CO1, CO3	K1, K2	PO1
v	Pharmacy act is established in which year? a. 1970 b. 1948 c. 1980 d. 1234	1	CO1, CO2	K1, K2	PO1
vi	Central drug laboratory is located at: a. Kolkata b. Mumbai c. Delhi d. Chennai	1	CO1	K1, K2	PO1

11	Write down the duties of state pharmacy council.	5	CO1, CO3	K1, K2	PO1
12	Write down the importance of cpcsea guidelines.	5	CO1, CO4	K1, K2	PO1
13	Briefly discuss about the magic remedies act.	5	CO1, CO2	K1	PO1

CO- Course Outcomes, KL- Knowledge Level, PO - Program Outcome

CO1	Understanding the basics of internet and its connections, web browsers
CO2	Understanding client-server architecture and use in internet
CO3	Able to configure basic LAN and connect computers to it.
CO4	Able to combine HTML, CSS, JavaScript for form validation
CO5	Understanding the implementation of PHP with database



Note : This above figure is only Example and must prepare this type of figure in these two column

	c. None of these	d. All						
xix	What is the warm temperature to store a schedule-P drug? a. 2 degree C c. 8 to 25 degree C C	b. 12 degree C d. 30-40 degree	1	CO1	K1, K2	PO1		
xx	The poison act was introduced in which year? a. 1220 c. 1520	b. 1919 d. All	1	CO1, CO2	K1	PO1		
Section B								
Answer any TWO out of THREE			[2 x 10 = 20Marks]					
Q. No.	QUESTIONS		Marks	COs	KL	PO		
2	What is the importance of prevention of animal cruelty act and briefly discuss about CPCSEA guideline.		10	CO1, CO3	K2	PO1		
3	Briefly discuss about definition, objective and different schedules of drug and cosmetic act.		10	CO1, CO2	K1	PO1		
4	Briefly discuss about pharmacy act 1948.		10	CO1, CO2	K2	PO1		
Section C								
Answer any SEVEN out of NINE			[7 x 5 = 35Marks]					
Q. No.	QUESTIONS		Marks	COs	KL	PO		
5	Briefly discuss about the rules for MTP act.		5	CO1, CO2	K1, K2	PO1		
6	Briefly discuss about pharmaceutical legislation.		5	CO1, CO3	K1, K2,	PO1		
7	What are the differences between bonded and non-bonded laboratory?		5	CO1	K2,	PO1		
8	Write notes on restricted licence and loan licence.		5	CO1	K1, K2	PO1		
9	Write down the duties of a drug inspector and a central drug analyst.		5	CO1, CO3	K2	PO1		
10	Write a short note on constitution of PCI.		5	CO1, CO3	K1, K2	PO1		

vii	PCI is reconstituted at every: a. 35 years c. 5 years	b. 34 years d. 90 years	1	CO1, CO3	K1, K2	PO1		
viii	Form-8 is specified to import of which drugs? a. Sch-C & C 1 c. Sch-B	b. Sch-S d. Sch-X	1	CO1, CO2	K1, K2	PO1		
ix	List of drugs that can be dispensed or sold with prescription is coming under which schedule? a. Sch-A c. Sch-B	b. Sch-H d. Sch-C	1	CO1, CO2	K1	PO1		
x	The parenteral preparations are coming under which schedule? a. Sch-A c. Sch-F	b. Sch-C d. All	1	CO1, CO2	K1	PO1		
xi	In which year the central pharmacy council of India was constituted? a. 1888 c. 1280	b. 1949 d. 1950	1	CO1, CO2	K1, K2	PO1		
xii	Fish liver oil is coming under which schedule? a. Sch-C c. Sch-B	b. Sch-C 1 d. Sch-D	1	CO1, CO2	K1	PO1		
xiii	Whole sale licence for sch-X drugs can be applied by which form? a. Form-19 c. Form-1	b. Form-19(c) d. All	1	CO1, CO2	K1, K2	PO1		
xiv	The position of a drug inspector is coming under which administrative committee if drugs and cosmetic act? a. Analytical c. Advisory	b. Executive d. All	1	CO1, CO3	K1, K2	PO1		
xv	The parenteral preparations are coming under which schedule? a. Sch-A c. Sch-F	b. Sch-C d. All	1	CO1, CO3	K1	PO1		
xvi	What is not an apparatus in a running pharmacy store? a. Indian pharmacopoeia c. Thermometer	b. Glass funnel d. All	1	CO1	K1, K2	PO1		
xvii	Standards for mechanical contraceptives are coming under which schedule? a. Sch-A c. Sch-R	b. Sch-H d. Sch-C	1	CO1, CO2	K1	PO1		
xviii	What is the duty of a government analyst? a. To check the sample	b. To inspect	1	CO1	K1	PO1		

11	Write a short on manual capsule filling machine.	5	CO1, CO2	K2, K3	PO1, PO2
12	Write note on Quality control tests for Packaging materials.	5	CO1	K1, K2	PO1, PO2
13	Explain in detail extraction of gelatin.	5	CO1, CO2	K2, K3	PO1, PO2

CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

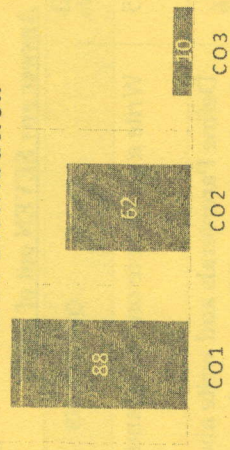
Course Outcomes	CO1	Know the various pharmaceutical dosage forms and their manufacturing techniques.
	CO2	Know various considerations in development of pharmaceutical dosage forms
	CO3	Formulate solid, liquid and semisolid dosage forms and evaluate them for their quality

Bloom's Level wise Mark Distribution



Level-1 = Level-2 = Level-3
Level-4 = Level-5 = Level-6

Course Outcome Wise Marks Distribution



Note : This above figure is only Example and must prepare this type of figure in these two column

		ARKAJAIN University Jharkhand		END TERM EXAMINATION School of Health & Allied Science	
				Program	B-PHARMACY
Branch	Bachelor of Pharmacy		Semester	5TH	
Subject Name	Industrial Pharmacy I		Year	2022/Odd	
Time: 3 Hour	<ul style="list-style-type: none"> Start writing from 2nd page onwards; don't Write on the 1st Page Backside Answer all Questions of Section A (Compulsory) Answer Any Two out of Three of Section B Answer Any Seven out of Nine of Section C Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u> 				
Max. Marks : 75					
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating		
	K2 : Understanding	K4 : Analysing	K6 : Creating		

Section A
All the Questions are **COMPULSORY**
Short Answer type Question [1 x 12 = 12 Marks]

Q. N 1	QUESTIONS	Marks	COs	KL	PO
i	Smallest size of the Capsule is denoted by which number? a) 0 b) 1 c) 2 d) 5	1	CO1	K2	PO2
ii	Which of the following plasticizer is preferred in capsule manufacturing, a) Sorbitol b) Povidone c) Polyethylene glycol d) HPMC.	1	CO1	K2, K3	PO1
iii	Empty gelatine capsule shell can be made from, a) Gelatin b) HPMC c) Carrageenan d) All of the above.	1	CO1	K2, K3	PO1
iv	Empty capsule has a moisture content in the range of a) 60% b) 12%-15% c) 50%-70% d) 30%- 64%.	1	CO1	K2, K3	PO1
v	Which treatment is used for solubility of gelatin a) Heat b) Formalin c) Water d) Alcohol	1	CO1	K2, K3	PO1, PO2

vi	Which of the following is a hydrophobic binder a) Gelatin b) Acacia c) Ethylcellulose d) PVP	1	CO1	K2, K3	PO1, PO2
vii	Separation of tablet into two or more distinct layer a) Capping b) Lamination c) Shipping d) Both a&b	1	CO1	K2, K4	PO2
viii	Unequal distribution of color is called a) Capping b) Lamination c) Mottling d) None	1	CO1	K2, K3	PO2
ix	Disintegration time for sugar coated tablet is a) 15 minutes b) 30 minutes c) 60 minutes d) 90 minutes	1	CO1	K2, K3	PO1, PO2
x	Lactose is used as in the tablet formulation a) Lubricant b) Glident c) Diluent d) Disintegrant	1	CO1	K2, K3	PO2
xi	Lal test is used for testing following parameter a) Sterility test b) Pyrogen test c) Leakage test d) Rabbit test	1	CO2	K2, K4	PO1, PO2
xii	Normal saline I.P. contains sodium chloride of a) 0.9% w/v b) 9% w/v c) 0.9% v/v d) 0.9% w/w	1	CO1	K2, K4	PO1, PO2
xiii	Which of the following container is hermitical sealed a) Vial b) Ampoule c) Screw capped bottle d) None of the above	1	CO1	K2, K3	PO1, PO2
xiv	Flow Property can be improved by a) Glident b) Diluent c) Lubricant d) Binder	1	CO 1	K2, K3	PO1, PO2
xv	Housing in an aerosol container made up of a) Delrin b) Dentifrice c) Dental paste d) Dental cone	1	CO 1	K2, K3	PO1, PO2
xvi	Infra-Red spectroscopy is used for determining a) Particle size b) Crystallinity c) Functional groups d) Shape	1	CO 2	K2, K3	PO1, PO2
xvii	The most common granulation method is a) Dry granulation b) Wet granulation	1	CO 1	K2, K4	PO1, PO2


xviii	_____ is ingredients of opaque hard gelatin capsule a) Glycerin b) Titanium dioxide c) Polyhydric alcohol d) Sorbitol	1	CO 1	K2, K3	PO2
xix	Cold cream is a) W/O emulsion b) O/W emulsion c) Both a and b d) None of the above	1	CO 1	K2, K3	PO1, PO2
xx	Preformulation is about ensuring a) Stability b) Safety c) Efficacy d) All of the above	1	CO 2	K2, K3	PO1

Section B

Answer any TWO out of THREE		[2 x 10 = 20Marks]			
Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Write a brief note on Various types of Tablets.	10	CO1 CO2	K1, K2, K3	PO1, PO2, PO2
3	Briefly explain about Qualitative standardization of Parenterals.	10	CO1 CO2 CO3	K1, K2, K3	PO1, PO2
4	Write a brief note on Formulation and preparation of suspension.	10	CO1 CO2	K1, K2	PO1, PO2

Section C

Answer any SEVEN out of NINE		[7 x 5 = 35Marks]				
Q. No.	QUESTIONS	Marks	COs	KL	PO	
5	Write a short note on Wet granulation technique.	5	CO1, CO2	K2 K3	PO2, PO3	
6	Define Parenterals and write about advantages & disadvantages of Parenterals.	5	CO1, CO2	K2 K3	PO1, PO2	
7	Write about various steps involved in sugar coating.	5	CO1	K1 K2	PO2, PO3	
8	Define aerosols. Write their advantages and disadvantages.	5	CO1, CO2	K2 K3	PO2, PO3	
9	Explain the formulation and Preparation of Cold cream.	5	CO1, CO2	K1 K3	PO1, PO2	
10	Write about identification tests for emulsions.	5	CO1	K2 K3	PO1, PO2	

 ARKAJAIN University Jharkhand		END TERM EXAMINATION School of Health & Allied Science	
Branch	Bachelor of Pharmacy		
Subject Name	Pharmacology-II		
Time: 3 Hour Max. Marks: 75	<ul style="list-style-type: none"> Start writing from 2nd page onwards; don't write on the 1st Page Backside Answer all Questions of Section A (Compulsory) Answer Any Two out of Three of Section B Answer Any Seven out of Nine of Section C Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under <u>Unfair Means</u> and will result in the <u>Cancellation of the Papers.</u> 	Program	B.PHARMACY
Knowledge Level (KL)	K1 : Remembering K2 : Understanding K3 : Applying K4 : Analysing K5 : Evaluating K6 : Creating	Semester	5TH
		Year	2022/Odd

Section A

All the Questions are COMPULSORY

Short Answer type Question

Q. N	QUESTIONS	Marks	COs	KL	PO
Q.1					
i	Match the following A) Bromocriptine (i) Inhibits gonadotropin release B) Goserelin (ii) Inhibits GH release C) Reserpine (iii) Inhibits prolactin release D) Lantreotide (iv) Enhance prolactin release a) A (i) B (ii) C (iii) D (iv) b) A (iii) B (i) C (iv) D (ii) c) A (iv) B (iii) C (ii) D (i) d) A (iii) B (ii) C (i) D (iv)	1	CO1, CO3	K1	PO1
ii	Sildenafil is a) Aldose reductase inhibitor b) D2- Agonist c) Phosphodiesterase-5 inhibitors d) α -Glucosidase inhibitor	1	CO1, CO3	K1	PO1
iii	Mechanism of action of Cholestyramine is a) Increases excretion of cholesterol b) Binds to bile acid c) Decreases excretion of cholesterol d) Decrease HMG-CoA	1	CO1, CO3	K1	PO1

	a) A (i) B (ii) C (iii) D (iv) b) A (ii) B (i) C (iii) D (iv) c) A (iv) B (iii) C (ii) D (i) d) A (iii) B (ii) C (i) D (iv)					
xii	Tamoxifen Citrate is a) Antiestrogen b) SERMs c) Aromatase Inhibitors d) Anabolic steroid	1	CO1	K1	PO1	
xiii	Antidote for Paracetamol poisoning a) Aspirin b) Hydrochloric acid c) N-acetyl cysteine d) Activated Charcoal	1	CO1, CO3, CO4	K1, K2	PO1	
xiv	Dinoprost is a) PGE ₁ b) PGE ₂ c) PGI ₂ d) PGF _{2α}	1	CO1	K1, K2	PO1	
xv	5-HT ₃ antagonist is a) Levocetirizine b) Ondansetron c) Domperidone d) Metoclopramide	1	CO1	K1	PO1	
xvi	Active metabolite of Carbimazole is a) Carbimazole b) Methimazole c) Carbimazole d) All of the above	1	CO1	K1, K2	PO1	
xvii	Epalrestat is a) Aldose reductase inhibitor b) D2- Agonist c) Bile acid sequestrant d) α-Glucosidase inhibitor	1	CO1	K1	PO1	
xvii i	Selective COX-2 inhibitor a) Piroxicam b) Indomethacin c) Celecoxib d) Diclofenac	1	CO1	K1	PO1	

iv	Nicorandil is a) Calcium channel blocker b) Potassium channel opener c) β-blocker d) Anabolic steroid	1	CO1, CO3	K1, K2	PO1	
v	Which of the following is not a lipid derived autacoids? a) Platelet activating factor b) Leukotrienes c) Histamine d) Prostaglandins	1	CO1, CO3	K1, K2, K3	PO1	
vi	Icatibant is a) Endothelin receptor antagonist b) Calcium channel blocker c) Aldosterone antagonist d) Bradykinin antagonist	1	CO1, CO3	K1, K2	PO1	
vii	Protamine sulphate a) Opioid antagonist b) D2-antagonist c) Heparin antagonist d) H2-antagonist	1	CO1, CO3	K1, K2	PO1	
viii	Drug acting as Renin Inhibitor is a) Aliskiren b) Propranolol c) Olmesartan d) Captopril	1	CO1, CO3	K1, K2	PO1	
ix	Lente Insulin is composed of a) 30% Amorphous + 70% Crystalline insulin b) Same as NPH c) 30% Crystalline + 70% Amorphous insulin d) 70% of amorphous Insulin	1	CO1, CO3	K1	PO1	
x	Prolonged use of aspirin causes a) Hypophosphatemia b) Hypercalcemia c) Hyperprothrombinemia d) Hypoprothrombinemia	1	CO1, CO3, CO4	K1	PO1	
xi	Match the following A) Quinidine (i) Class II B) Verapamil (ii) Class III C) Amiodarone (iii) Class IV D) Esmolol (iv) Class I	1	CO1	K1, K2, K3	PO1	

xix	Metyrapone is a) Aldose reductase inhibitor b) 11 β hydroxylase inhibitor c) Bile acid sequestrant d) α-Glucosidase inhibitor	CO1	K1, K2	PO1
xx	Atosiban is a) Oxytocin antagonist b) Adrenergic agonists c) Ergot alkaloid d) Antiprogesterin	CO1	K1	PO1

Section B

Answer any TWO out of THREE

[2 x 10 = 20Marks]

Q. No.	QUESTIONS	Mar ks	COs	KL	PO
2	Define diuretics. Classify Diuretic drugs & write notes on pharmacodynamic & pharmacokinetics of Loop diuretics.	10	CO1, CO3, CO4	K1, K2, K4, K6	PO1, PO8, PO9
3	Classify Hypolipidemic drugs and discuss about HMG-CoA reductase inhibitors.	10	CO1, CO3, CO4	K1, K2, K6	PO1, PO8, PO9
4	Classify Oral Antidiabetic drugs & write mechanism of action of Sulfonylureas and Dipeptidyl peptidase-4 (DPP-4) inhibitors.	10	CO1, CO3, CO4	K1, K2, K3, K5, K6	PO1, PO8, PO9

Section C

Answer any SEVEN out of NINE

[7 x 5 = 35Marks]

Q. No.	QUESTIONS	Mar ks	COs	KL	PO
5	Write notes on drug therapy of Migraine.	5	CO1, CO3, CO4	K1, K2	PO1, PO8, PO9
6	Write notes on Acute iron poisoning.	5	CO1	K1, K2, K3, K6	PO1, PO8, PO9
7	Write notes on Anti-platelet drugs.	5	CO1, CO3	K1, K2, K6	PO1, PO8, PO9

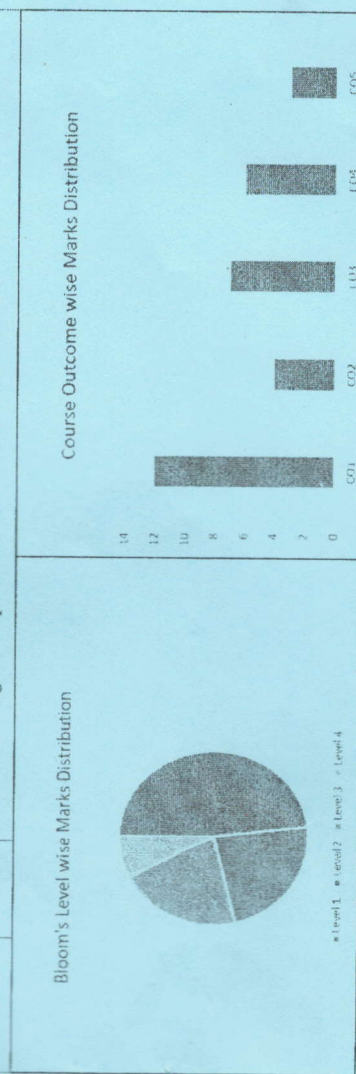
8	Write classification of Antiarrhythmic drugs and Mechanism of action of each class.	5	CO1, CO3, CO4	K1, K2, K3, K6	PO1, PO8, PO9
9	Define Mechanism of action of Calcium Channel Blockers and Write Adverse effect of Nifedipine.	5	CO1, CO3, CO4	K3, K4, K5, K6	PO1, PO8, PO9
10	Write synthesis, storage and secretion of thyroid hormone.	5	CO1, CO3, CO4	K1, K2	PO1, PO8, PO9
11	Classify drugs used for Heart failure & M.O.A. of Cardiac glycosides.	5	CO1, CO3, CO4	K1, K2, K6	PO1, PO8, PO9
12	What is Bioassay? Write the Principle and Uses of Bioassay.	5	CO1, CO2, CO3, CO4	K1, K2, K3	PO1, PO8, PO9
13	Write M.O.A. of Insulin & types of its preparation.	5	CO1, CO3, CO4	K1, K2	PO1, PO8, PO9

CO- Course Outcomes,

KL- Knowledge Level,

PO - Program Outcome

Course Outcomes	CO1	CO2	CO3	CO4	CO5
	Understanding the basics of internet and its connections, web browsers	Understanding client-server architecture and use in internet	Able to configure basic LAN and connect computers to it.	Able to combine HTML, CSS, JavaScript for form validation	Understanding the implementation of PHP with database



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ARKAJAIN
University
Jharkhand

END TERM EXAMINATION
School of Health & Allied
Science

Branch	Bachelor of Pharmacy		Program	B.PHARMACY
Subject Name	Medicinal Chemistry-II		Semester	5TH
			Year	2022/Odd
Time: 3 Hour Max. Marks : 75	<ul style="list-style-type: none"> Start writing from 2nd page onwards; don't Write on the 1st Page Backside Answer all Questions of Section A (Compulsory) Answer Any Two out of Three of Section B Answer Any Seven out of Nine of Section C Possession of Mobile Phones or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u> 			
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating	
	K2 : Understanding	K4 : Analysing	K6 : Creating	

Section A

All the Questions are **COMPULSORY**

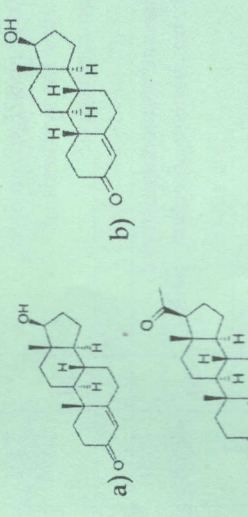
Short Answer type Question

Q. N 1

[1 x 20 = 20 Marks]

QUESTIONS	Marks	COs	KL	PO
i The given IUPAC name 2 methoxy carbonyl-tropane-3-yl-benzoate of _____? a) Cocaine b) Hexylcaine c) Benzocaine d) Butacaine	1	CO1	K2	PO1
ii Methotrexate is _____ class of anti neoplastic agent? a) Plant product c) Alkylating agent b) Atimetabolites d) Antibiotics	1	CO1	K1	PO9
iii The NPH insulin comes under which category of insulin? a) Short acting b) Long acting c) Intermediate acting d) Ultra short acting	1	CO2	K1	PO1
iv Which of the follows drugs belongs to Biguanides class of antidiabetic drugs? a) Nateglinide b) Rosiglitazone c) Voglibose d) Phenformin	1	CO2	K1	PO1
v The reaction of p-nitrobenzoic acid with ethyl alcohol give intermediate that on reduction give which local anesthetic compound?	1	CO1	K4	PO10

vi	a) Procaine c) Lignocaine Chlorpropamide belongs to which class of oral hypoglycemic agents? a) Biguanide c) Thiazolidinedione	1	CO2	K1	P01
vii	Which of the following drug used for treatment of erectile dysfunction? a) Sildenafil b) c) Norgestrel b) Mifepristone d) Levonorgestrel	1	CO2	K1, K2	P01
viii	Which of the following drugs is an Antihistaminic class? a) Promethazine c) Prednisolone b) Pilocarpine d) Cycloserine	1	CO1	K1, K2	P01
ix	Which of the following drug is not used for CHF diseases? a) Digoxin c) Warfarin b) Digitoxin d) Tezosetan	1	CO1	K1	PO9
x	Which of the following local anaesthetic drugs does not belong to anilide derivatives? a) Lignocaine c) procaine b) prilocaine d) Bupivacaine	1	CO3	K1	PO10
xi	Select the drug of the following acts as alkylating agent a) 5-Fluorouracil c) Cyclophosphamide b) Doxorubicin d) Vincristine	1	CO1	K1	P01
xii	Which antineoplastic agent is a folic acid analogues a) Methotrexate c) Cytarabine b) Mercaptopurine d) Fluorouracil	1	CO1	K1, K2	PO9
xiii	Type-2 (NIDDM) is treatment by which types of drugs? a) Insulin injection b) Oral hypoglycemic agent c) Both a and b d) None of these	1	CO2	K1	P01
xiv	Which of the following is a structure of Testosterone?	1	CO2	K1, K2	P01

xv	 <p>The structure of Tolbutamide is _____? a) None of these b) _____ c) _____ d) _____</p>	1	CO1	K3	PO10
xvi	Which of the following drug is not a 1 st generation antihistamines? a) Aminoalkyl ether c) Piperazines b) Azole derivatives d) Ethyldiamines	1	CO2	K1, K2	P01
xvii	Cardiotonics drugs are used in _____? a) Atrial flutter c) CHF b) Atrial fibrillation d) All of these	1	CO2	K1	P01
xviii	Which of the following antibiotics used as anti neoplastic agent? a) Dactinomycin c) Doxorubicin b) Daunorubicin d) All of these	1	CO1	K1	P01
xix	Which of the following drugs belongs to Thiazolidinedione class of antidiabetic drugs? a) Rosiglitazone c) Tolbutamide b) Phenformin d) Chlorpropamide	1	CO1	K1, K2	PO9
xx	The local anaesthetic drugs dibucaine contains which heterocyclic rings? a) Quinazoline c) Benzimidazole b) Quinoline d) Indole	1	CO3	K1	PO10
Section B					
Answer any TWO out of THREE					
Q. No.	QUESTIONS	Marks	COs	KL	PO
2	What are Diuretics? Classify them and write the MOA of carbonic anhydrase inhibitors & synthesis of Acetazolamide?	10	CO1 CO4	K1, K2 K4	PO1 PO9 PO10

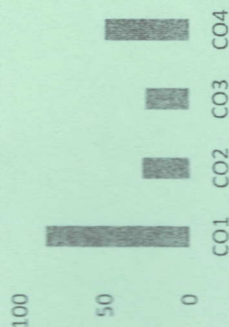
Course Outcomes	CO1	Understand the chemistry of drugs with respect to their pharmacological activity
	CO2	Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs
	CO3	Know the Structural Activity Relationship of different class of drugs
	CO4	Study the chemical synthesis of selected drugs

Bloom's Level wise Marks Distribution



■ Level 1 = Level 2
■ Level 3 = Level 4

Course Outcome Wise Mark Distribution



Note : This above figure is only Example and must prepare this type of figure in these two column

3	What are H1 receptor antagonists? Explain their mechanism of action? Outline the synthesis of Diphenhydramine and promethazine?	10	CO1 CO4	K1, K2, K3	PO1 PO10
4	Write details Nomenclature and stereochemistry of steroids? write structure, mechanism of action, SAR and uses of testosterone?	10	CO1 CO4	K1, K2, K3	PO1 PO10

Section C

Answer any SEVEN out of NINE

[7 x 5 = 35 Marks]

Q. No.	QUESTIONS	Marks	COs	KL	PO
5	Write note on digitoxin ?	5	CO1 CO2 CO3	K1, K2	PO1
6	Explain the stereochemistry of steroids.	5	CO1 CO3	K1, K2, K3	PO1 PO10
7	What coagulant and anticoagulant agents? Write the synthesis of warfarin.	5	CO1 CO4	K1, K2, K3	PO1 PO9 PO10
8	Write note on drug used for oral contraceptive ?	5	CO1 CO2 CO3	K1, K2	PO1
9	Describe SAR of Local anesthetic agents ?	5	CO1 CO4	K1, K2, K3	PO1 PO9 PO10
10	Classify antiarrhythmic agents with examples? Give the synthesis of Disopyramide phosphate?	5	CO1 CO4	K1, K2, K3	PO1 PO9 PO10
11	What coagulant and anticoagulant agents? Write the synthesis of warfarin.?	5	CO1 CO2 CO3	K1, K2	PO1
12	Write synthesis and use of Benzocaine ?	5	CO1 CO2 CO3	K1, K2	PO1
13	Write note on various insulin preparation ?	5	CO1 CO4	K1, K2, K3	PO1 PO9 PO10



ARKAJAIN
University
Jharkhand

END TERM EXAMINATION
School of Health & Allied
Science

Branch	Bachelor of Pharmacy	Program	B.PHARMACY
Subject Name	Pharmacognosy and Phytochemistry -II	Semester	5TH
		Year	2022/Odd

• Start writing from 2nd page onwards; don't write on the 1st Page Backside
 • Answer all Questions of Section A (Compulsory)
 • Answer Any Two out of Three of Section B
 • Answer Any Seven out of Nine of Section C
 • Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under Unfair Means and will Result in the Cancellation of the Papers.

Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating
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Section A

All the Questions are **COMPULSORY**

[1 x 12 = 12 Marks]

Q.N	Short Answer type Question	QUESTIONS	Marks	COs	KL	PO
Q.1	i	Which of the following drug, does not, belongs to family umbelliferae? a) Caraway b) Ajwain c) Coriander d) Cardamom	1	CO1	K1, K2	PO1
	ii	Which of the following are the chemical constituents of Digitalis? a) Purpurea glycoside A b) Purpurea glycoside B c) Both d) None	1	CO1	K1, K2	PO1
	iii	Which of the following is the chemical test for identification of digitalis? a) Keller-Kiliani test b) Bal jet Test c) Legal Test d) All	1	CO4	K1, K2, K3, K5	PO1, PO2, PO3
	iv	Which one of the following family, belongs to crude drug bitter almond? a) Rosaceae b) Myrtaceae c) Liliaceae d) Scrophulariaceae	1	CO1	K1, K2	PO1
	v	Opium is a dried _____ a) Latex b) Roots c) Flowers d) Fruits	1	CO1	K1, K2	PO1

vi	Which of the following chemical test is also named as Schoenteten's reaction? a) Bromine test b) Nitric acid test c) Borax test d) None	1	CO4	K1, K2, K3, K5	PO1, PO2, PO3
vii	Alkaloids are type of substances. a) Acid b) Chemical c) Neutral d) Basic nitrogenous	1	CO1	K1, K2	PO1, PO3
viii	Which of the following are secondary glycosides present in digitalis? a) Digitoxin b) Gitoxin c) Both d) None	1	CO1	K1, K2	PO1
ix	Which of the following are the synonyms of Rouwolfia? a) Serpentina root b) Both c) Sarpagandha d) None	1	CO1	K1, K2	PO1
x	Which one of the following is the biological source of Senna? a) Cassia angustifolia b) Aloe barbadensis c) Rouwolfia serpentina d) Digitalis purpurea	1	CO1	K1, K2	PO1
xi	Which one of the following chief active constituents of fennel? a) Carvone b) Fenchone c) Borneol d) None	1	CO1	K1, K2	PO1
xii	Which one of the following is the synonym for peppermint oil? a) Mentha oil b) Eucalyptus c) Oleum terebinthinae d) Chenopodium album	1	CO1	K1, K2	PO1
xiii	Citral oil is obtained from: a) Cymbopogon flexuosus b) Cinnamomum camphora c) Eucalyptus globules d) Chenopodium ambrosioides	1	CO1	K1, K2	PO1
xiv	Cardamom contains volatile oil not less than: a) 1% b) 2.0% c) 0.4% d) 4%	1	CO1	K1, K2	PO1

xv	Which of the following test is used to identify crude drug Digitalis? a) Legal Test b) Baljet Test c) Both d) None	1	CO1	K1, K2, K3, K5	PO1, PO2, PO3
xvi	Which of the following family belongs to black catechu? a) Leguminosae b) Rosaceae c) Umbelliferae d) None	1	CO1	K1, K2	PO1
xvii	Which of the following isolation methods used for the isolation of menthol? a) Hydro-distillation b) Both c) Steam distillation d) None	1	CO4	K1, K2	PO1
xviii	Which of the following isolation methods used for the isolation of Citral? a) Hydro-distillation Method b) Fractional crystallization Method c) Both d) None	1	CO4	K1, K2	PO1
xix	Resins containing benzoic acid or Cinnamic acid are called as a) Oleoresins b) Glycoresins c) Oleogum d) Balsam	1	CO1	K1, K2	PO1
xx	20. Glycoresins are made up of a) Resins + Sugar b) Resins + Volatile oil c) Resins + Gum d) Resins + Fixed oil	1	CO1	K1, K2	PO1

Section B

Answer any TWO out of THREE

[2 x 10 = 20Marks]

Q. No.	Q. No.	Q. No.	Q. No.
2	Briefly explain Shikimic acid pathway and Role of Shikimic acid pathway.	10	K1, K2, K3
3	Describe the general properties of volatile oil. Write the detailed Pharmacognostic study of Clove.	10	K1, K2, K4
4	Discuss in detail about the isolation, identification and utilization of Atropine.	10	K1, K2, K3, K4

Section C

Answer any SEVEN out of NINE

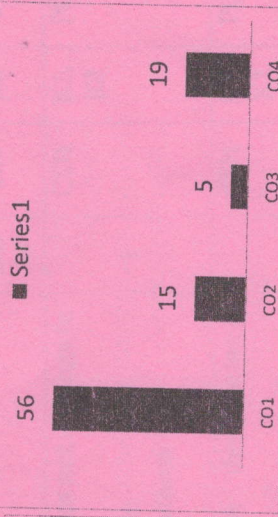
[7 x 5 = 35Marks]

Q. No.	QUESTIONS	Marks	COs	KL	PO
5	Write the chemical classification of tannin with examples.	5	CO1	K1, K2	PO1
6	Write the therapeutic applications of Fennel and Coriander.	5	CO3	K1, K2, K3	PO1, PO2
7	Write the biological source, cultivation, chemical constituents, chemical test use and adulterants of Rauwolfia.	5	CO1	K1, K2, K5	PO1
8	Write down the biological source, microscopic features, chemical constituents and uses of Indian Senna.	5	CO1	K1, K2	PO1
9	Write down the methods of extraction of crude drugs.	5	CO1	K1, K2, K3	PO1, PO3
10	Briefly explain Industrial production, estimation and utilization of the Vincristine and Vinblastine.	5	CO2	K1, K3, K2	PO1, PO3
11	Describe the Biological source, Chemical constituents and Uses of Aloes.	5	CO1	K1, K2	PO1
12	Explain about the Biological source, Chemical constituents and Uses of Gentian.	5	CO1	K1, K2	PO1
13	What are the applications of Spectroscopy?	5	CO4	K1, K2, K3, K4	PO1

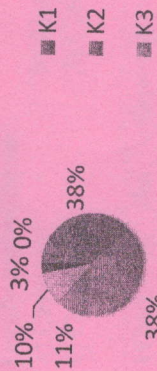
CO- Course Outcomes, **KL- Knowledge Level,** **PO – Program Outcome**

Course Outcomes	CO1	CO2	CO3	CO4	CO5
	Understanding the basics of internet and its connections, web browsers	Understanding client-server architecture and use in internet	Able to configure basic LAN and connect computers to it.	Able to combine HTML, CSS, JavaScript for form validation	Understanding the implementation of PHP with database

Course Outcome wise Marks Distribution



Bloom's Level wise marks Distribution



Note : This above figure is only Example and must prepare this type of figure in these two column