

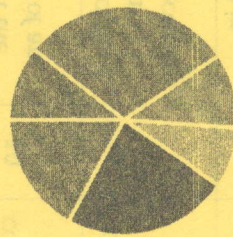
10	What are Suppository bases? Describe in details about Theobroma oil as a suppository base.	5	CO4	K6	PO1
11	Differentiate between Flocculated and Deflocculated Suspensions.	5	CO4	K5	PO9
12	Describe briefly about various stability problems in Emulsions.	5	CO4	K4	PO9
13	In what proportion should alcohol 95% and 55% strengths be mixed to make 80% alcohol? Calculate by using allegation method.	5	CO2	K5	PO10

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

Course Outcomes	CO1	Know the history of profession of pharmacy.
	CO2	Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations.
	CO3	Understand the professional way of handling the prescription.
	CO4	Preparation of various conventional dosage forms.

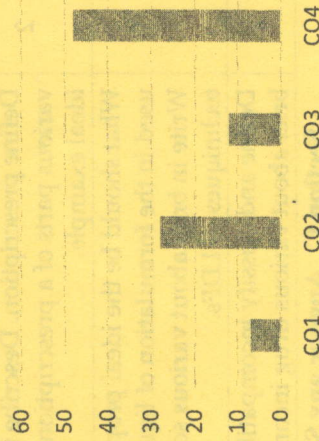
GRAFICAL REPRESENTATION


Bloom's Level wise Marks Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course Outcome Wise Marks Distribution



 ARKAJAIN University Jharkhand	End Term Examination School of Health & Allied Science	
	Branch Pharmacy	Program B. Pharmacy
Subject Name Pharmaceutics - I	Semester I	Year 2023/Odd
<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 in the Cancellation of the Papers.</u> 		
Time: 3 Hour Max. Marks : 75		
Knowledge Level (KL)	K1 : Remembering	K5 : Evaluating
	K2 : Understanding	K6 : Creating

Section A (Each question Carry 01 Marks from Q1-i to Q1-xx) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	The first edition of British Pharmaceutical Codex (BPC) was published in which year? a) 1907 b) 1911 c) 1968 d) 1973	1	CO 1	K1	PO1
ii	Which one of the following is a Preservative? a) Sorbitol b) Methyl Paraben c) Phosphate Buffer d) Simethicone	1	CO 4	K3	PO9
iii	The first edition of Indian Pharmacopoeia (IP) was published in which year? a) 1947 b) 1966 c) 1955 d) 1946	1	CO 1	K1	PO1
iv	The part of the prescription which gives instructions to the patient is _____. a) Subscription b) Signatura c) Inscription d) Superscription	1	CO 3	K2	PO1
v	B.i.d. / b.d. means _____. a) Once a day b) Twice a day c) Three times a day d) Four times a day	1	CO 3	K1	PO1
vi	Which one of the following is a Surfactant? a) Sodium lauryl sulfate b) Propylene glycol c) Glycerin d) Citric acid	1	CO 4	K3	PO9

vii	What is the use of liquid paraffin emulsion? a) Antiseptic b) Astringent c) Pharmaceutical aid d) Purgative	1	CO 4	K3	PO 9
viii	Which one of the following is a Co-solvent? a) Tween b) Spans c) Propylene glycol d) Ascorbic acid	1	CO 4	K5	PO 9
ix	Ascorbic acid is an example of _____. a) Wetting agents b) Humectants c) Surfactants d) Antioxidants	1	CO 4	K2	PO 9
x	The agents that increase the viscosity of formulations are called as _____. a) Wetting agents b) Suspending agents c) Surfactants d) Antioxidants	1	CO 4	K4	PO 9
xi	_____ is the example of an Oleaginous base. a) Beeswax b) Gelatin c) Lanolin d) Hard Paraffin	1	CO 4	K1	PO 9
xii	_____ are homogeneous, clear, semisolid preparations consisting of a liquid phase and a suitable gelling agent. a) Ointments b) Pastes c) Creams d) Gels	1	CO 4	K6	PO 1
xiii	Which type of water is used as vehicle in the formulation of Parenteral solutions? a) Potable water b) Purified water c) Distilled water d) Water for injection	1	CO 4	K4	PO 9
xiv	According to Young's Formula, $Dose\ of\ Child = \frac{\text{Age} + 12}{Age + 12} \times adult\ dose$ a) Age in Years b) Age in months c) Weight of child d) Surface area of child	1	CO 2	K5	PO 10
xv	When large dose of a drug is required to produce an effect than normal dose of drug, the phenomenon is called _____. a) Tachyphylaxis b) Additive effect c) Tolerance d) Synergism	1	CO 2	K3	PO 1
xvi	The agents that are added to maintain the pH of a solution is called as _____. a) Sweeteners b) Preservatives c) Buffers d) Antioxidants	1	CO 4	K2	PO 9

xvii	The type of emulsion in which the oil droplets are dispersed in a continuous aqueous phase is _____. a) o/w emulsion. b) w/o emulsion c) o/w/o emulsion d) w/o/w emulsion	1	CO 4	K4	PO 9
xviii	Which one of the following is a Flocculating agent? a) KCl b) Sodium carbonate c) Sodium silicate d) Methyl cellulose	1	CO 4	K4	PO 10
xix	An extraordinary response to a drug different from its characteristic pharmacological action is called as _____. a) Tolerance b) Additive effect c) Synergism d) Idiosyncrasy	1	CO 2	K3	PO 1
xx	The outermost layer of skin is known as _____. a) Epidermis b) Stratum corneum c) Dermis d) Subcutaneous tissues	1	CO 4	K1	PO 1
Section B Answer any Two out of Three [2 x 10 = 20 Marks]					
Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Define prescription. Describe in details about the various parts of a prescription with the help of an ideal example.	10	CO3	K2	PO1
3	What should be the ideal properties of an excipient used in the formulation of liquid dosage forms. Write in brief about various solubility enhancement techniques of LDFs.	10	CO4	K6	PO10
4	Define and classify incompatibility. Describe in brief about various drug incompatibilities.	10	CO2	K2	PO1
Section C Answer any Seven out of Nine [7 x 5 = 35 Marks]					
Q. No.	QUESTIONS	Marks	COs	KL	PO
5	Write about National Formulary of India.	5	CO1	K1	PO1
6	Discuss about the Young's formula for Paediatric dose calculations. What will be the dose for a child of 5 years, if the adult dose of a drug is 400mg?	5	CO2	K5	PO10
7	Write short notes on Idiosyncrasy and Tachyphylaxis.	5	CO2	K3	PO1
8	Write briefly about Dusting powders and Eutectic mixtures with suitable examples.	5	CO4	K2	PO9
9	Write about various evaluation tests of Semi-solid dosage forms.	5	CO4	K5	PO10

10	Discuss the theories of indicator for acid base titration.	CO1	K1, K2	PO1, PO3
11	Define pH. Discuss the measurement of pH.	CO1, CO2	K1, K2	PO1
12	Discuss the process of precipitation in Gravimetry.	CO1	K1, K2, K3	PO1, PO3
13	Write the construction, advantage and disadvantage of Hydrogen electrode.	CO1, CO3	K1	PO1

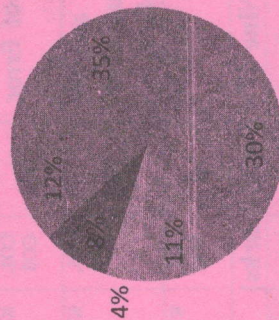
CO- Course Outcomes, **KL**- Knowledge Level, **PO** – Program Outcome

Course Outcomes	CO1	Understand the principles of volumetric and electrochemical analysis
	CO2	To carryout various volumetric and electrochemical titration
	CO3	To develop analytical skills

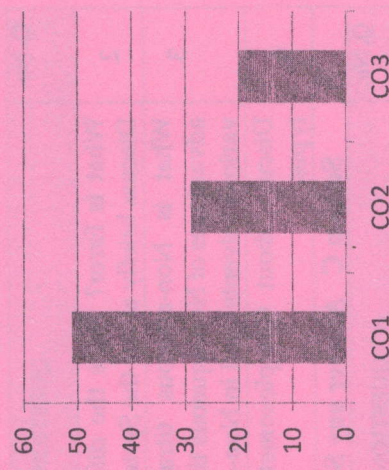
GRAFICAL REPRESENTATION

BLOOM'S LEVEL WISE MARKS DISTRIBUTION

■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6



COURSE OUTCOME WISE MARKS DISTRIBUTION



Branch	Bachelor in Pharmacy	Program	B. Pharmacy
Subject Name	Pharmaceutical Analysis-I	Semester	I
		Year	2023/Odd
Time: 3 Hour			
Max. Marks : 75			
Knowledge Level (KL)	K1 : Remembering K2 : Understanding	K3 : Applying K4 : Analysing	K5 : Evaluating K6 : Creating

- 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.

Section A (Each question Carry 01 Marks from Q1-i to Q1-xx) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	According to Bronsted-Lowry theory, Acid is _____. a) Proton acceptor b) Proton donor c) Both 'a' and 'b' d) None of these	1	CO1	K1, K2	PO1
ii	The number of significant digits in 320.003560 is _____. a) 6 b) 7 c) 8 d) 9	1	CO3	K4	PO1
iii	Degree of uncertainty is known as _____. a) Accuracy b) Precision c) Error d) Mean	1	CO3	K1	PO1
iv	How much Sodium hydroxide is required to prepare 1N NaOH solution. a) 10 gm in 1000 ml. b) 20 gm in 1000 ml. c) 30 gm in 1000 ml. d) 40 gm in 1000 ml.	1	CO1	K2, K3	PO1
v	The errors which can be either avoided or corrected is known as _____. a) Determinate error b) Indeterminate error c) Random error d) All of these	1	CO3	K1, K2	PO1
vi	A person is unable to judge the lower meniscus of burette at the end point during the titration comes under _____. a) Error of the method b) Instrumental error c) Personal error d) Reagent error	1	CO3	K2	PO1

vii	The unit of measurement which describes the acidity and alkalinity of a solution is ____. a) Scale b) pH c) Meter d) None of these	CO2	K1, K2	PO1	1	1	PO1
viii	Which one from following method is used to reduce systematic error? a) Running a blank determination b) Running a control determination c) Running of parallel determination d) All of these	CO2	K1, K2, K3	PO1	1		PO1
ix	Complex metric titrations are useful for the determination of ____. a) Non-metal ions b) Acidic drugs c) Metal ions d) All of the above	CO2	K1, K2	PO1	1		PO1
x	The difference between the measured value and true value is known as ____. a) Absolute error b) Relative error c) Precision d) Real error	CO3	K1, K5	PO1	1		PO1
xi	EDTA is a ____. a) Tetradentate ligand b) Octadentate ligand c) Hexadentate ligand d) Pentadentate ligand	CO1	K1, K2	PO1, PO3	1		PO1, PO3
xii	The point at which the reaction between titrant and titrand is showing changes in terms of colour called as ____. a) True value b) End-point c) Error d) Standard value	CO2	K1	PO1	1		PO1
xiii	The solubility of the precipitate _____ with decreasing the temperature. a) Increases b) Decreases c) No effect d) Neutral	CO2	K1, K2	PO1	1		PO1
xiv	Which is example of aprotic solvent? a) H ₂ SO ₄ b) KOH c) Benzene d) None of these	CO1	K1, K2	PO1	1		PO1
xv	The titration of acetic acid and sodium hydroxide is an example of ____. a) Weak acid vs Weak base b) Strong acid vs Strong base c) Weak acid vs Strong base d) Strong acid vs Weak base	CO2	K1	PO1, PO3	1		PO1, PO3
xvi	Which method is used to determination of primary amine? a) Karl Fischer titration b) Diazotization Titration c) Both 'a' and 'b' d) None of these	CO2	K1, K2	PO1, PO3	1		PO1, PO3

xvii	What is the pH range of Phenolphthalein? a) 1.5-2.5 b) 2.3-5.3 c) 6.8-8.4 d) 8.3-11.0	CO1	K1, K3	PO1	1		PO1
xviii	The Hydrogen electrode is mainly used for a) Checking the stability of reference buffer solutions b) In checking the accuracy of other pH electrodes c) To serve the primary standard for pH measurements. d) All are correct	CO2	K1	PO1	1		PO1
xix	A solution of pH = 0 is ____. a) Acidic b) Basic c) Neutral d) All are correct	CO1	K1, K2	PO1, PO3	1		PO1, PO3
xx	Which factor is responsible for impurities in pharmaceutical product? a) Raw material used in manufacture b) Reagents used in manufacturing process c) Manufacturing hazards d) All of the above	CO3	K1	PO1	1		PO1
Section B Answer any Two out of Three [2 x 10 = 20 Marks]							
Q. No.	QUESTIONS	Marks	COs	KL	PO		
2	What is Error? Write the different types of Error. Discuss briefly about the Systemic error.	10	CO1, CO3	K1, K2	PO1		
3	What is Non-aqueous titration? What are the advantages of Non-aqueous titration? Discuss about various solvents used in Non-aqueous titration.	10	CO1, CO2	K1, K6	PO1, PO3		
4	Discuss about Complexometric Titration and its types.	10	CO1, CO2	K2, K5	PO1		
Section C Answer any Seven out of Nine [7 x 5 = 35 Marks]							
Q. No.	QUESTIONS	Marks	COs	KL	PO		
5	Describe acid and base according to Bronsted-Lowry theory with example.	5	CO1	K1, K2	PO1, PO3		
6	What is metallochromic indicator? What are the requirements for it?	5	CO1, CO2	K1, 2, 3, 6	PO1		
7	Define Accuracy and write the method of expressing accuracy.	5	CO1, CO3	K2, K6	PO1, PO3		
8	Write short note on Diazotization titration.	5	CO2	K1, K3	PO1, PO3		
9	Write the difference between primary standard and secondary standard.	5	CO1, CO3	K3, K4, K5, 6	PO1, PO3		