

# INDEX

Criteria No : 2 Metric

no: 2.2.1

**File name (QIM) The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners**

Sr.No.	Content
<b>Assessment of Slow and Advanced learners</b>	
1.	Identification of learners policy
2.	Identification by Student Practical Evaluation
<b>Details of special programs for slow learners</b>	
3.	Remedial Class Record
4.	Question bank/ University question paper
5.	Model Answer for question bank/ Subject Notes
6.	Assignment
7.	Distribution of Mentor : Mentee
8.	Mentor Guidelines and Code of Conduct
9.	Mentor Booklet
<b>Details of special programs for Advanced learners</b>	
10.	Competitive exam guidance
11.	Appreciation Advanced Learner
12.	Mini Projects
13.	Expert Lectures/ Webinars/ Seminars



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14.	Co –Curricular & Extra- curricular
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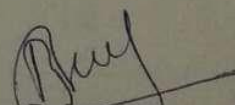
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### Policy for identification of slow and advanced learner

1. The mentor system used to identification of slow and advanced learners and provides a softer approach to conversion of slow learner to advanced learner under the watchful eyes of the mentor.
2. Upon admission into the institution, the students are observed during theory and practical sessions.
3. Slow and Advanced learner identification is done using "Index of Learning styles questionnaire" and the result is mapped.
4. Prior to any internal assessment, the slow learners are identified in each subject based upon their performance during viva voce of theory (Conducted in practical hours).
5. Make up classes are arranged for such students, night library facility is also provided to the students.
6. The advanced learners also act as student mentors to their peers since it has been observed that student's acceptability of peers is more.
7. Group study is encouraged in such cases. To make the transition of slow learners to advanced learners easier and to sustain the advanced learners.
8. The institution adopts several measures such as encouraging the students to attend various co-curricular and extra-curricular events, conducting remedial classes for benefit of students who have backlogs, coaching for competitive examinations to name a few.



  
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## SECOND SESSIONAL EXAMINATION MARK LIST 2022-23

Class-Second Year B. Pharm (2019 Pattern)

Semester-III

Subject-Physical Pharmaceutics I

Theory/ Practical

Total No. of Student Appeared	Total No. of Student Present		Total No. of Student Absent		Roll No. of Absent Students	
66	T	P	T	P	T	P
	66	66	00	00	00	00

Roll No.	Name of Students	Theory			Total	Practical			Total
		Sessional 30 M	Conve rted to 15 M	Cont. Assignm ent 10M		Sessio nal 40 M	Con verte d to 10 M	Cont. Assign ment 5M	
1.	Apsunde Gayatri Sahebrao	17	9	8	17	30	8	4	12
2.	Argade Siddhesh Balasaheb	15	8	8	16	30	8	4	12
3.	Bangar Viraj Bhagwat	25	13	8	21	34	9	4	13
4.	Bankar Rohit Dadabhau	23	12	8	20	34	9	4	13
5.	Bawake Pradnya Dnyaneshwar	28	14	8	22	36	9	4	13
6.	Bhosale Shainesh Ganpat	19	10	8	18	25	7	4	11
7.	Bhusal Ruchita Ashok	18	9	8	17	29	8	4	12
8.	Chate Shivprasad Dilip	20	10	8	18	28	7	4	11
9.	Chavhan Shivani Ganesh	19	10	8	18	33	9	4	13
10.	Cholke Dhanashri Sanjay	18	9	8	17	30	8	4	12
11.	Darunte Pratiksha Uddhav	24	12	8	20	35	9	4	13
12.	Deokar Shubham Dinkar	23	12	8	20	29	8	4	12
13.	Dhanapune Pavan Subhash	16	8	8	16	29	8	4	12
14.	Dige Ajay Ganesh	21	11	8	19	31	8	4	12
15.	Dighe Mayuri Rajendra	24	12	8	20	34	9	4	13
16.	Dighe Rajashree Gangadhar	22	11	8	19	35	9	4	13
17.	Dumbare Swamini Gorakshnath	29	15	8	23	36	9	4	13



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18.	Gadhawe Aakanksha Sunil	18	9	8	17	30	8	4	12
19.	Game Prajwal Sandeep	24	12	8	20	35	9	4	13
20.	Ghogare Prajwal Vijendra	25	13	8	21	34	9	4	13
21.	Gholve Gayatri Gunwant	27	14	8	22	35	9	4	13
22.	Gondkar Tejas Sandeep	17	9	8	17	35	9	4	13
23.	Gorde Mahesh Annasaheb	6	3	8	11	28	7	4	11
24.	Gore Aarti Somnath	29	15	8	23	37	10	4	14
25.	Gulave Deep Prakash	17	9	8	17	31	8	4	12
26.	Jadhav Balaji Suresh	15	8	8	16	30	8	4	12
27.	Jangale Mayuri Navnath	22	11	8	19	29	8	4	12
28.	Jawale Akshada Ashok	25	13	8	21	34	9	4	13
29.	Jondhale Nikita Machhindra	24	12	8	20	36	9	4	13
30.	Jondhale Tejal Ankush	28	14	8	22	35	9	4	13
31.	Kale Shraddha Pralhad	26	13	8	21	34	9	4	13
32.	Kamble Rutuja Shashikant	27	14	8	22	35	9	4	13
33.	Karande Pradip Balshiram	9	5	8	13	27	7	4	11
34.	Karle Swapnali Sanjay	26	13	8	21	30	8	4	12
35.	Kasar Harshal Raosaheb	25	13	8	21	34	9	4	13
36.	Kharde Shekhar Namdeo	22	11	8	19	33	9	4	13
37.	Kothawale Akshay Ambadas	19	10	8	18	28	7	4	11
38.	Kumavat Nandini Vitthal	29	15	8	23	37	10	4	14
39.	Lahare Smita Sandeepkumar	22	11	8	19	34	9	4	13
40.	Mandhare Gurudeo	23	12	8	20	35	9	4	13
41.	Mare Tejaswini Vasant	24	12	8	20	36	9	4	13
42.	Mirajgave Swapnil Sanjay	24	12	8	20	34	9	4	13
43.	Mulay Sakshi Uttam	27	14	8	22	36	9	4	13
44.	Nale Rutuja Abasaheb	27	14	8	22	34	9	4	13
45.	Nangare Vinayak Baban	25	13	8	21	31	8	4	12
46.	Nehepatil Kartik Ramesh	28	14	8	22	37	10	4	14
47.	Nikumbh Asmita Manoj	29	15	8	23	37	10	4	14
48.	Pardeshi Deven Pramod	17	9	8	17	32	8	4	12
49.	Pawar Anjali Mukund	24	12	8	20	35	9	4	13
50.	Sable Shreya Kakasaheb	24	12	8	20	36	9	4	13
51.	Sathe Sakshi Khanderao	14	7	8	15	27	7	4	11
52.	Satpute Uday Anil	21	11	8	19	28	7	4	11
53.	Sayyad Shifa Inayat	22	11	8	19	32	8	4	12



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54.	Shaikh Shahid Jakir	21	11	8	19	33	8	4	12
55.	Shinde Nayan Pandurang	26	13	8	21	35	9	4	13
56.	Shinde Rutuja Vilas	27	14	8	22	35	9	4	13
57.	Somvanshi Trupti Rajendra	28	14	8	22	34	9	4	13
58.	Sonawane Ketan Laxman	21	11	8	19	28	7	4	11
59.	Soni Gauri Shivdas	26	13	8	21	28	7	4	11
60.	Surawase Neha Anil	27	14	8	22	32	8	4	12
61.	Tekade Shraddha Santosh	28	14	8	22	33	9	4	13
62.	Varpe Tanmay Rajendra	7	4	8	12	27	7	4	11
63.	Vikhe Bhagyashri Nachiket	21	11	8	19	28	7	4	11
64.	Vikhe Ritesh Dilip	10	5	8	13	24	6	4	10
65.	Vikhe Vaishnavi Parashuram	17	9	8	17	25	7	4	11
66.	Wade Saurabh Sanjay	29	15	8	23	33	9	4	13

67	ASAWALE VRUSHALI KISAN	27	14	8	22	32	8	4	12
68	BACHKAR PRAGATI ASHOK	21	11	8	19	32	8	4	12
69	DIGHE KAJAL MANIK	25	13	8	21	33	9	4	13
70	DIGHE RUTIK SHARAD	8	4	8	12	30	8	4	12
71	GAIKWAD URMILA SURYAJI	27	14	8	22	31	8	4	12
72	NIBE VAISHNAVI SOPAN	27	14	8	22	32	8	4	12
73	PANSARE AKANKSHA DATTATRAYA	27	14	8	22	34	9	4	13
74	SATWADHAR MANIK PARMESHVAR	27	14	8	22	28	7	4	11
75	SHINDE POOJA DILIP	27	14	8	22	30	8	4	12
76	VIKHE ATHARVA KIRAN	8	4	8	12	28	7	4	11



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77	WAKCHAURE ABHISHEK BABASAHEB	25	13	8	21	30	8	4	12
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**Remedial Classes time table (2021-22)**

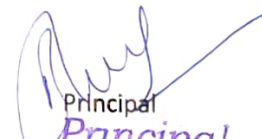
**Term I Odd Semester**

**w.e.f. 16.10.2021 (Saturday)**

TIME	DAY : EVERY SATURDAY			
	FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL YEAR
10.00-11.00	PA I/ RKG	PE/ RJB	IP I/ MHK	IP II/ KVD
11.00-12.00	PIC/ MSB	PMicro/ SDMN	MC II/ SDMG	Pcy Practice/ SBB
12.00-1.00	CS/ RSJ	PP I/ RBL	PCOG PHY II/ DNV	IMA/ HSB
LUNCH BREAK				
2.00-3.00	HAP I/ RDG	POC II/ ASD	PCOL II/ SBD	NDDS/ SSS
3.00-4.00	Pceu I/ KVD	-----	PJ/ RJB	-----

  
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**Remedial Classes time table (2021-22)**


**Term II Even Semester**

**w.e.f. 26.03.2022 (Saturday)**

TIME	DAY : EVERY SATURDAY			
	FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL YEAR
10.00-11.00	HAP II/ RDG	Pcol I/ SAV	Biotech/ SDMN	SPP/ APP
11.00-12.00	POC I/ RJB	Pcog Phyto/ SRV	Pcol-III/SBD	BIOSTAT & RM/ RBL
12.00-1.00	BIOCHEM/ HSB	Medichem I/ ASD	QA/SSS	Pharm Reg Sci/ MHK
LUNCH BREAK				
2.00-3.00	PATHO/ SAV	PP II/KVD	MC-III/SDMG	QC & Stand of Herbals/ RSJ
3.00-4.00	EVS/ SBB	POC-III/ RKG	Biopharm/ MSB	-----
4.00-5.00	CA/ SKP	-----	HDT/DNV	-----

  
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Remedial Class Record-Attendance Sheet

Academic Year: - 2021-2022

Class:- Second yr.BPh Semester:- III Name of Subject:- Physical Pharmaceutics

Subject Teacher:- Dr. R. B. Laware.

I

Rol I No	Name of the Student	16/10/2021	23/10/2021	30/10/2021	6/11/2021	13/11/2021	20/11/2021	27/11/2021		
1.	Aher Harshada S.	P	P	P	P	P	P	P		
2.	Bagle vaishnavi B.	P	P	P	P	P	P	P		
3.	Chavan sopan A.	P	P	P	P	P	P	P		
4.	Khose vaishnavi	P	P	P	P	P	P	P		
5.	Sonawane shubham.	P	P	P	P	P	P	P		
6.	Solve Prohle	P	P	P	P	P	P	P		

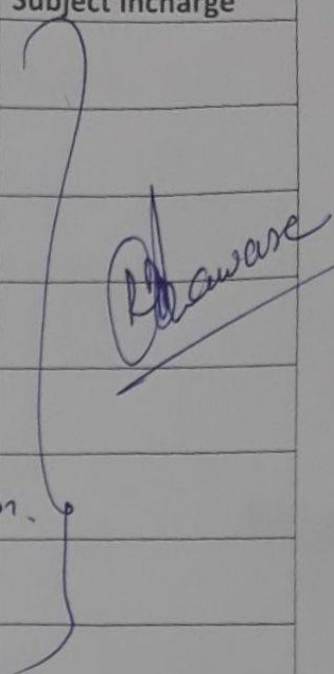
Subject Teacher

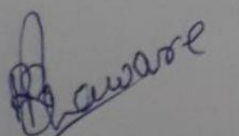
Academic Dean

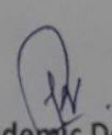
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Date	Topic Taught	Signature of the Subject Incharge
16/10/2021	Solubility of the drugs	
23/10/2021	Solubility of the drugs	
30/10/2021	States and properties of matter	
6/11/2021	Liquid complexes, liquid crystals.	
13/11/2021	Physicochemical properties of drug molecules.	
20/11/2021	Surface and Interfacial Phenomenon.	
27/11/2021	Complexation and protein binding.	

  
Subject Teacher

  
Academic Dean

  
Principal



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Remedial Class Record

Academic Year: - 2021-2022

Class:- Second yr. B. Pharm.

Semester:- III

Name of Subject:- physical pharmacology I

Subject Teacher:- Dr. R. B. Laware

Sr.No.	Name of The Students	Number of Class Conducted	Previous Class Test/Sessional Marks	Progress/ Marks After remedial coaching
1.	Aher Harshada S.	07	7	11
2.	Bagle Vaishnavi B.	07	6	3
3.	Chavon sapna A.	07	7	9
4.	Khose vaishnavi	07	7	12
5.	Sonawane shubham.	07	8	05
6.	Salve pratik	07	7	8
7.				
8.				
9.				

Academic In charge

Laware  
Subject In charge



Total No. of Questions : 6]

SEAT No. :

P2089

[Total No. of Pages : 2

[5552]-401

S.Y.B. Pharmacy

**PHYSICAL PHARMACEUTICS - II**  
**(2015 Pattern) (Semester - IV) (Theory)**

Time : 3 Hours]

[Max. Marks : 60

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Answers to the two sections should be written in separate books.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Figures to the right indicate full marks.

**SECTION - I**

- Q1)** Explain the methods to determine shelf life of a pharmaceutical formulation.  
Write a note on accelerated stability studies. [10] CO2

OR

What do you understand by Newton's law of flow? Describe various types of flow: CO1

- Q2)** Attempt any four of the following : [12]
- a) Illustrate applications of rheology in suspension. CO4
  - b) Explain yield value in plastic flow? CO1
  - c) What is Langmuir adsorption isotherm? CO4
  - d) Explain surface tension. How can you measure it? CO2
  - e) Explain the HLB scale. CO1
  - f) Justify : first order reaction is independent on initial concentration of reactant. CO3
  - g) What do you understand by reversible reactions? CO3

- Q3)** Write notes on any two of the following: [8]
- a) Explain the concept of thixotropy and state its application in pharmacy. CO4
  - b) Surface active agents. CO1
  - c) Kraft and cloud point. CO1
  - d) Order and molecularity. CO3

P.T.O.



SECTION - II

**Q4)** Define colloids. What are its different types? Compare the properties of different types of colloids. [10] CO1, CO2

OR

Enumerate the various derived properties of powder. How can these be determined? CO2

**Q5)** Attempt any four of the following :

[12]

- a) Describe : Brownian motion and Gold number. Give its importance in the field of pharmacy. CO1, CO3
- b) Explain coulter counter method in detail. CO2
- c) Justify factors affecting flow of powders. CO1
- d) Briefly describe DLVO theory. CO4
- e) Explain method to determine particle size based on sedimentation method. CO2
- f) What are protective colloids? What are its applications in pharmacy? CO4
- g) Explain assessment of flow properties of powders. CO1

**Q6)** Write notes on any two of the following:

[8]

- a) Importance of particle size and size distribution. CO1
- b) Colloidal system with reference to its stability. CO1
- c) Method for determining surface area. CO2
- d) Electrical double layer. CO4

■ ■ ■



Total No. of Questions—6]

[Total No. of Printed Pages—3

Seat No.	
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[5245]-4001

S.Y. B. Pharmacy (Fourth Semester) EXAMINATION, 2017  
PHYSICAL PHARMACEUTICS—II  
(2015 PATTERN)

Time : Three Hours

Maximum Marks : 60

- N.B. :— (i) All questions are compulsory.  
(ii) Answers to the two sections should be written in separate answer books.  
(iii) Neat diagrams must be drawn wherever necessary.  
(iv) Figures to the right indicate full marks.

SECTION-I

1. Explain the difference between surface tension and interfacial tension. CO1  
Describe the various methods used to measure surface tension and interfacial tension. CO2  
[10]

Or

- Explain the various methods to determine order of reaction. CO2
2. Attempt any *four* of the following : [12]
- (a) What is the principle behind Ostwald viscometer ? CO2
  - (b) What is the difference between plastic and pseudoplastic flow ? CO1
  - (c) What is critical micelle concentration ? State its importance. CO4
  - (d) Explain adsorption isotherm. CO4
  - (e) What is plug flow and how can it be avoided ? CO1
  - (f) Describe mechanism of hydrolysis as degradation pathway with examples. CO4
  - (g) Discuss the effect of temperature on rate of a reaction. CO1

P.T.O.



3. Write notes on any *two* of the following :

[8]

- (a) Viscoelasticity
- (b) Bulges and spurs
- (c) Spreading coefficient
- (d) Accelerated stability studies.

CO<sub>1</sub>

CO<sub>1</sub>

CO<sub>1</sub>

CO<sub>3</sub>

#### SECTION-II

4. Define and give importance of Micromeritics in pharmacy. CO<sub>1</sub>

Discuss the effect of the following factors on the flow properties of powders :

[10]

- (a) Particle shape
- (b) Porosity and density
- (c) Moisture, and
- (d) Glidants.

Enlist methods to improve flow properties of powders.

CO<sub>1</sub>

Or

Discuss the salient features of lyophobic and lyophilic colloids. CO<sub>1</sub>

Describe the various factors which influence their stability.

5. Attempt any *four* of the following :

[12]

- (a) State and explain Schulze-Hardy rule. CO<sub>4</sub>
- (b) What is meant by protective colloid ? Explain the concept with suitable examples. CO<sub>1</sub>
- (c) Define Angle of repose, Porosity and Granule density. CO<sub>1</sub>
- (d) Describe the process of Micellar solubilization. Give its applications in pharmacy. CO<sub>1</sub>, CO<sub>4</sub>



(e) Draw a neat and labelled diagram of Coulter counter apparatus. CO2

In a Coulter counter, electrolyte solution is added in order to measure size distribution. Why ?

(f) Explain the concept of Donnan-membrane equilibrium. CO1

(g) What do you understand by the following terms : CO1

(i) Brownian motion

(ii) Gold number.

6. Write notes on any *two* of the following : [8]

(a) Optical properties of colloids

(b) Specific surface and its determination CO2

(c) Explain : CO4

(i) Hofmeister series

(ii) Coacervation. CO1

(d) Derived properties of powders.



Total No. of Questions—6]

[Total No. of Printed Pages—2

Seat No.	
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[5345]-4001

S.Y. B.Pharmacy (IV Sem.) EXAMINATION, 2018  
PHYSICAL PHARMACEUTICS—II  
(2015 PATTERN)

Time : Three Hours

Maximum Marks : 60

- N.B. :— (i) All questions are compulsory.  
(ii) Answers to the two sections should be written in separate answer-books.  
(iii) Neat diagrams must be drawn wherever necessary.  
(iv) Figures to the right indicate full marks.

SECTION - I

Q.1 Explain in details surface active agents and add a note on HLB scale. CO1 10 marks

OR

Explain the methods to determine shelf life of a pharmaceutical formulation.  
Write a note on accelerated stability studies.

CO2  
CO3

Q.2 Attempt any four of the following :

12 marks

- Explain the mechanism for oxidation as degradation pathway with examples.
- Describe collision theory of chemical reaction.
- What do you understand by viscoelasticity?
- Explain why interfacial tension cannot be measured by capillary rise method.
- State the importance of critical micelle concentration.
- Illustrate the applications of thixotropy in pharmaceutical formulations.
- Explain the principle behind Ostwald viscometer.

CO1  
CO4  
CO1  
CO1  
CO1  
CO4  
CO1

Q.3. Write notes on any two of the following :

8 marks

- Langmuir adsorption isotherm
- DuNouy Ring method
- Reversible reactions
- Dilatant flow

CO4  
CO2  
CO3  
CO1

P.T.O.



**SECTION - II**

- Q.4 Define Micromeritics. Enlist different methods used for the determination of particle size and discuss in detail the Andreason Pipette method. 10 marks

CO1, CO2

OR

Differentiate between lyophobic and lyophilic colloids. Discuss the stability of colloids including: a) Schulze-Hardy rule b) Hofmeister series c) Co-acervation

CO1, CO4

- Q.5 Attempt any four of the following :

12 marks

- Explain: Protective colloid.
- What is meant by "equivalent spherical diameter"? Explain its importance in representing particle size.
- Give Pharmaceutical applications of colloids.
- Describe the process of Micellar solubilization. Give its applications in pharmacy.
- Draw a neat and labelled diagram of Coulter counter apparatus. In a Coulter counter, electrolyte solution is added in order to measure size distribution. Why?
- Explain the concept of Donnan-membrane equilibrium.
- With suitable examples explain factors affecting flow of powders.

CO2

CO1

CO4

CO4

CO2

CO4

CO1

- Q.6. Write notes on any two of the following :

8 marks

- Optical properties of colloids
- Specific surface and its determination
- Brownian motion and Gold number
- Derived properties of powders

CO1

CO1

CO1

CO1



**QUESTION BANK**  
**BP 403 T. Physical Pharmaceutics-II**  
**UNIT I: COLLOIDS**

Question No.	Questions	CO Mapped	BL
1	What are colloids? Differentiate between colloids and coarse dispersion	1	1
2	Classify Colloids with example of each	1	2
3	State and explain Schulze-Hardy rule.	1	2
4	What is meant by protective colloid? Explain the concept with suitable examples.		2
5	Explain the concept of Donnan-membrane equilibrium and its role in pharmacy.	1,4	2
6	What do you understand by the following terms : i. Brownian motion ii. Gold number.	1	1
7	Explain Optical properties of colloids	1,2	2
8	Explain Kinetic properties of colloids	1,2	2
9	Explain Electrical properties of colloids	1,2	2
10	Define: Hofmeister series Coacervation	1	1
11	Elaborate on electrical properties of colloids and its role in stability of colloids.	3	3



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12	Explain the concept of electrical double layer.	1,2	2
13	Illustrate role of Nernst and Zeta Potential in stability of colloids	3	2
14	Elaborate the steps in purification of colloids	1,2	2
15	Write a note on stabilization of colloids	3	2

## UNIT II: RHEOLOGY

Question No.	Questions	CO Mapped	BL
1.	Define the Newtonian and non Newtonian system. Explain Dilatant system with example	1	1
2.	What is Newton's law of flow of fluids?	1	1
3.	What are applications of rheology in pharmaceuticals?	4	1
4.	Compare single point instruments with multipoint instrument for determination of viscosity	2	2
5.	What is the principle behind viscosity measurement by Ostwald viscometer?	2	1
6.	Differentiate between plastic and pseudoplastic flow?	1, 2	2
7.	Note on Viscoelasticity Falling Ball Viscometer Cup and Bob Viscometer Cone and plate Viscometer Bulges and spurs	1,2,3,4	2
8.	Define Thixotrophy and negative thixotrophy	1	1
9.	Explain thixotrophy with its applications in formulation development	2,3,4	2
10.	How thixotrophy is determined?	2	1



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### UNIT III: COARSE DISPERSION

Question No.	Questions	CO Mapped	BL
1	Define dispersed system.	1	1
2	Differentiate between flocculated and deflocculated suspension	1	2
3	Explain theories of emulsion	2, 4	2
4	Classify emulsion with suitable example of each.	1	2
5	Describe the stability of emulsions	3	2
6	Describe emulsion formulation by HLB method	4	2
7	What are various factors affecting stability of emulsion?	2, 3	1
8	Write a note on preservation of emulsion	1,4	1

### UNIT IV: MICROMERITICS

Question	Questions	CO	BL
1	Define i. Particle diameters-Surface diameter, Volume diameter ii. Particle number	1	1
2	Explain applications of micromeritics in pharmacy	4	2
3	Enumerate the various derived properties of powder. How can these be determined?	2,4	2
4	Explain methods to determine particle size determination	2	2
5	Explain Factors affecting flow of powders	3,4	2
6	Define angle of repose, porosity and granule density	1	
7	Explain particle size determination by sedimentation method	2	2



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8	Write the principle of particle size determination by coulter counter method	2	1
9	Explain sieving method for determination of particle size distribution		
10	Describe methods to determine Specific surface area	2	1
11	Write a brief note on adsorption method to determine surface area	2,3	1
12	Distinguish between True density and bulk density	2	2
13	What do you understand by derived and fundamental properties of powder?	1,2	1
14	What are adsorption isotherms? Explain Langmuir and Freundlich isotherms in detail?	1,2	1

### UNIT V: DRUG STABILITY

Question	Questions	CO	BL
1	Define the terms i. Order of reaction ii. Molecularity of reaction iii. Complex order reaction	1	1
2	Derive an equation for zero order kinetics	2	2
3	Derive an equation for first order kinetics	2	2
4	Derive an equation for second order kinetics	2	2
5	describe Hydrolysis and oxidation degradation pathways of drug degradation	1	1
6	Why Half life of a zero order reaction is dependent on initial concentration of reactant while that of first order reaction is independent on initial concentration of reactant?	1	1
7	How is the half life for first order reactions calculated?	1	1
8	Distinguish between molecularity and order of reaction.	1	1
9	What is the effect of temperature on rate of reaction?	2	1
10	Describe Arrhenius equation and energy of activation	2	2
11	What are Apparent zero order reaction	1	1
12	Write a note on Accelerated stability studies	3	2
13	Assuming first order reaction justify time required for 99.9% drug decomposition is 3times the time required for completion of 90% drug decomposition.	3	3
14	How order of reaction is determines?	2	1



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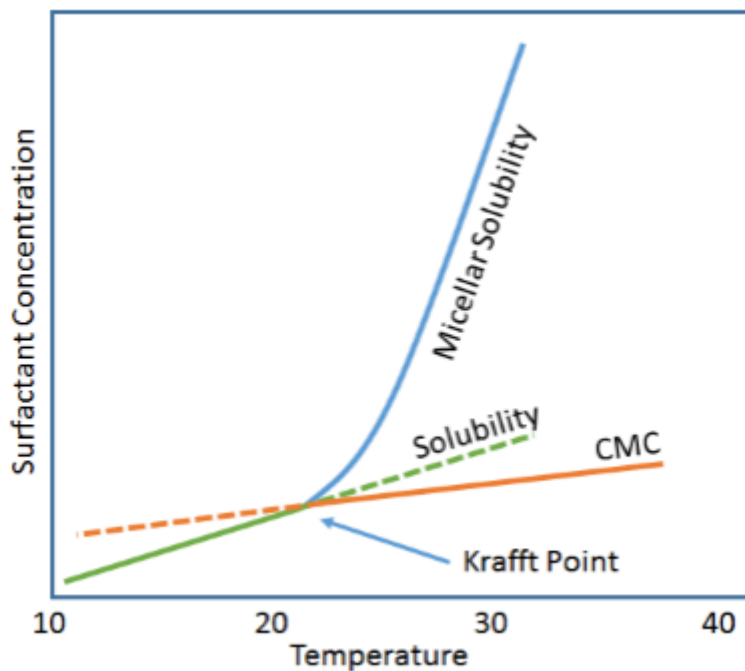


## Model Answers:

**Ans. 1: Explain: Kraft point and gold number.**

KRAFFT POINT,  $K_t$  :

- The solubility of a surface active agent depends on the temperature of the system. But adequate concentration of surface active agent is required to form micelles. This relationship is stated by Krafft point.
- Krafft point is defined as the temperature at which the solubility of the surfactant is equal to the cmc. It is named after German chemist Friedrich Krafft.
- At Krafft point, the concentration of the surfactant is sufficient to form micelles.
- In fact, micelles are more soluble in water than the monomers. Thus the solubility shows a sudden increase by several folds. This type of behavior is exhibited by certain nonionic surface active agents. One has to verify the Krafft point and attempts to prepare colloids above this



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### Figure: Graph of Surfactant concentration Vs Temperature indicating Krafft Point

- At low temperatures the surfactant is a normal molecule with some sort of solubility curve that would tend to increase as shown in above figure. But surfactants have CMCs which also change with temperature, as shown.
- The point where the two curves cross is the Krafft point. What is the significance of this point? As soon as you have micelles then the “solubility” of the surfactant is defined by micelle formation and, roughly speaking, you can have large amounts of micellar solubility because adding more surfactant simply creates more micelles. But if you are at a temperature where the solubility is less than the CMC there are no micelles so you cannot have any form of micellar solubility.
- Below the Krafft point the solubility of the surfactants is too low for micellization so solubility alone determines the surfactant monomer concentration. As temperature increase the solubility increases until at Krafft Point the CMC is reached. At this temperature a relatively large amount of surfactant can be dispersed in micelles and solubility increases greatly.

### GOLD NUMBER

- Covering up of lyophobic particles by lyophilic particles is known as its protective action and such colloids are called protective colloids.
- The protective properties of colloids is expressed in terms of Gold Number.
- The gold number is defined as the minimum weight in milligrams of a protective colloid (dry weight of dispersed phase) required to prevent a color change from red to violet in 10 ml of gold sol on addition of 1 ml of 10 % solution of sodium chloride.
- Basically gold sol is a hydrophobic colloid and has a red colour. It is a special type of colloid which is known as lyophobic sol which are liquid hating or solvent hating i.e. these sols do not have liquid as solvent. In such sols, both the dispersed phase and dispersion medium is solid only. A gold sol may contain particles of various size composed of several atoms of gold and so it is called as multimolecular sol.



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➤ When an electrolyte like sodium chloride is added, coagulation of colloids is observed indicating the violet color. When protective colloids are added, these stabilize the gold sol and prevent the change to violet color.

Lower the gold number, greater the protective action. For example: bismuth subcarbonate does not dissociate sufficiently in a dispersion. Now, if tragacanth is added, it provides protective action. If bismuth subcarbonate is ionized, then tragacanth (negative charge) reacts with positive ions of bismuth and forms a gel.

**Ans. 2: Discuss the concept of DLVO theory along with the energy curve and explain how this theory is applied in stabilizing the colloidal dispersion.**

**DLVO THEORY (Derjaguin, Landau, Verway and Overbeek Theory):**

Lyophobic colloids are thermodynamically unstable and tend to form aggregates. Dispersed particles are highly charged. Stability of the dispersion is explained on the basis of DLVO theory.

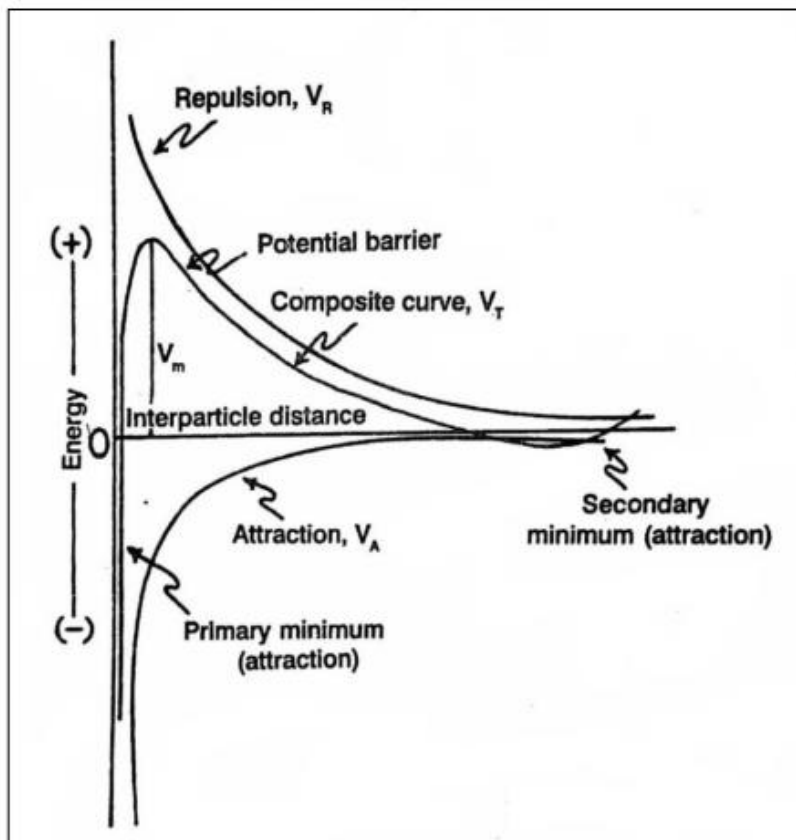
➤ According to this theory, the distance between two dispersed particles mainly influences particle-particle interactions. Using this theory, one can approximately determine the amount of electrolyte (of a particular valency type) required to precipitate or stabilize a colloid.

➤ In a colloidal dispersion, the Brownian motion results in frequent collisions between particles. Such interactions are mainly responsible for the stability of colloids. There are two types of interactions, namely attractions and repulsions.

➤ When attractions predominate, the particles adhere after collision and aggregate. When repulsions predominate, the particles rebound after collisions and remain individually dispersed. The potential energy versus interparticle distance for particles in dispersion is given in Figure a.



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**Figure a: Potential energy Versus interparticle distance (in angstroms) for particles in suspension**

These are described as follows. The interactions between particles are described as follows:

- Van der Waals attraction forces: These forces depend mainly on the chemical nature and size of the particle. These forces are London type and cannot be altered readily. The potential energy of attraction is represented by  $V_A$  (Figure a).
- Electrostatic repulsive forces: The electrostatic repulsive forces depend mainly on the density, surface charge and thickness of the double layer. These indicate the magnitude of zeta potential. The potential energy representing repulsions is denoted by  $V_R$  (Figure a).



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➤ Net energy of interaction: An algebraic addition of the above two curves gives the net energy of interaction. The potential energy is represented by  $V_T$  (Figure a).

The following conclusions may be drawn from the energy curves:

➤ Primary minimum (sign of precipitation): When particles are very close to each other, atomic orbitals overlap and penetrate each other. This is indicated by a rapid rise in potential energy. The net result is a stronger attraction which leads to precipitation.

➤ Net energy peak (sign of better stability): At intermediate distances, appreciable repulsive forces operate (positive zeta potential energy). This potential barrier keeps the particles in Brownian movement and imparts stability to the dispersion. At this peak, the maximum potential is designated by  $V_m$ . The stability of a colloidal system is defined by the height of the maximum in the potential energy curve.

➤ This value of  $V_m$  is about 10 to 20 kJ, which corresponds to a zeta potential of about 50 mV. Such a system is considered kinetically stable. The potential energy barrier must be surmounted, if the colloidal particles approach each other sufficiently close to fall into the deep primary minimum of reversible coagulation.

➤ Secondary minimum (sign of aggregation): This is observed when the particles are separated by long distances, about 1000 to 2000 Å (Angstrom). Particles experience attraction forces and form aggregates or coacervates. The presence of a secondary minimum is taken advantageously in the controlled flocculation of a coarse dispersion.

➤ In summary, according to DLVO theory, colloidal particles coagulate whenever their kinetic energy is sufficient to surmount the potential energy barrier,  $V_m$ . Thus, the coagulation of colloidal particles may be accelerated by two ways:

(a) By reducing the height of the potential barrier,

(b) By increasing the kinetic energy of particles

## STABILIZING THE COLLOIDAL DISPERSION



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To understand stabilization of the colloidal dispersion it is required to understand sensitization and protective colloidal action

### Sensitization

Lyophobic dispersions are unstable in the presence of even small concentration of electrolytes. Effect is due to neutralisation of the charge on the particles.

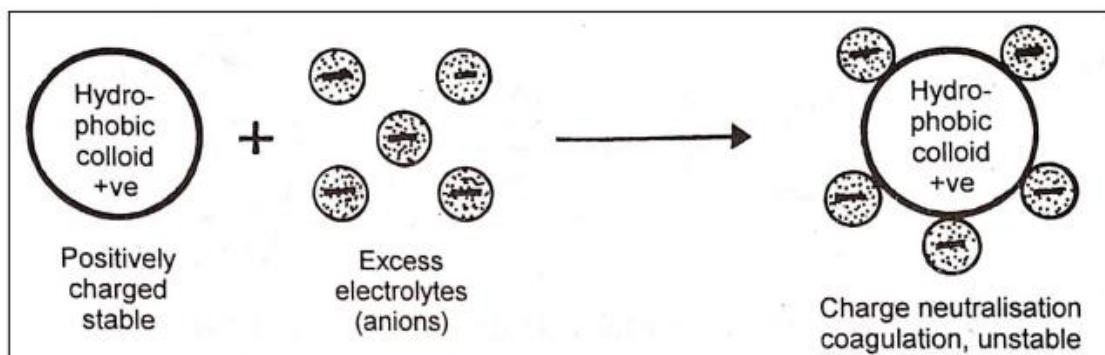


Figure: General interaction of electrolytes with hydrophobic colloids

- If a very small amount of hydrophilic colloid is added to a hydrophobic sol, it is sometimes observed that the latter has become more sensitive to precipitation on subsequent addition of electrolytes. This sensitization may be partly due to adsorption of the oppositely charged hydrophilic sols on hydrophobic particles as shown below.

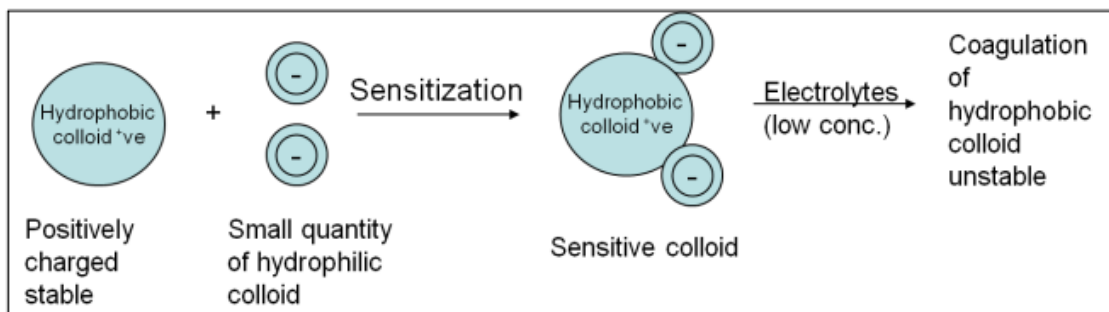


Figure: Sensitization of hydrophobic colloid (Examples of positive colloid)



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### Protective colloidal action:

When a large amount of hydrophilic colloid carrying opposite charges is added to hydrophobic colloids, these get adsorbed on the hydrophobic particles and form a protective layer around it. This adsorption layer prevents the precipitating ions reaching the sol particle (Figure). Therefore, coagulation is prevented.

Now the entire colloid may behave like a hydrophilic colloid, which is thermodynamically stable. The colloid that helps to stabilize other colloids is called as a protective colloid.

➤ The Phenomenon of protection is defined as a process by which the sol particles are prevented from coagulation induced by an electrolyte due to the previous addition of some lyophilic sol.

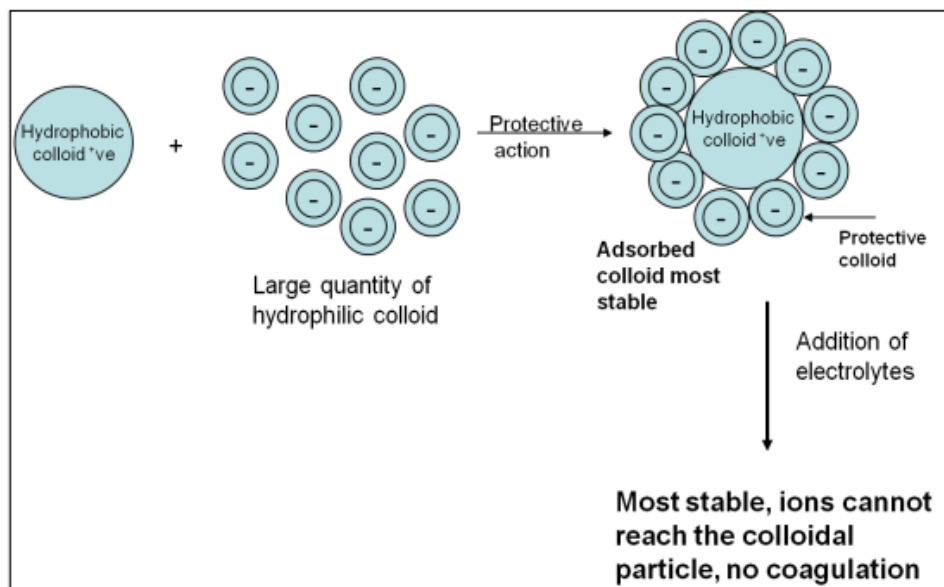


Figure: Protective colloidal action of hydrophilic colloid on hydrophobic colloid surface adsorption



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The protective properties of colloids is expressed in terms of Gold Number.

➤ The gold number is defined as the minimum weight in milligrams of a protective colloid (dry weight of dispersed phase) required to prevent a color change from red to violet in 10 ml of gold sol on addition of 1 ml of 10 % solution of sodium chloride.

➤ Basically gold sol is a hydrophobic colloid and has a red colour. When an electrolyte like sodium chloride is added, coagulation of colloids is observed indicating the violet color. When protective colloids are added, these stabilize the gold sol and prevent the change to violet color.

**Ans. 3: Discuss different approaches used to achieve flocculation in suspensions.**

The flocs do not form hard cakes and redispersion of the sediment is easy. Once the powders are properly wetted and dispersed in a medium then flocculations can be produced gradually by the addition of flocculating agents.

**Different approaches are used to achieve flocculation:**

➤ Addition of electrolytes: Most dispersed particles possess a surface charge. The intensity of this charge can be reduced by the addition of agents with an opposite charge (electrolytes). As a result, the zeta potential decreases and particles establish attractive forces between adjacent particles.

➤ Addition of Surfactant and Polymers: These are long chain compounds. These substances act by adsorbing a part of their chains on the particle surface and projecting out the remaining part into the medium. This type of bridging promotes the formation of flocs.

**Ans. 4: Enlist the physical instability markers of emulsion and discuss any two.**

Physical Instability Markers



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1. Flocculation
2. Creaming
3. Coalescence
4. Breaking
5. Phase Inversion

**Flocculation:**

In this case, neighboring globules come closer to each other and form colonies in the external phase (Figure

a). This aggregation of globules is not clearly visible. This is probably the initial stage that leads to instability.

The extent of flocculation of globules depends on

- (a) Globule size distribution
- (b) Charge on the globule surface
- (c) Viscosity of the external medium

**To Prevent Flocculation:**

➤ Uniform sized globules prevent flocculation. This can be achieved by proper size reduction process.

➤ A charge on the globules exerts repulsive forces with the neighboring globules. This can be achieved by using ionic emulsifying agent, electrolytes etc.

➤ If the viscosity of the external medium is increased, the globules become relatively immobile and flocculation can be prevented. This can be obtained by adding viscosity improving agents (bodying agents or thickening) such as hydrocolloids or waxes.

Flocs slowly move either upward or downward leading to creaming. Flocculation should not be confused with creaming. Flocculation is due to the interaction of attractive and repulsive forces, whereas creaming is due to density differences in the two phases.



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### **Creaming:**

Creaming is the concentration of globules at the top or bottom of the emulsion. The floccules move either upward or downward leading to creaming. Creaming may also be observed on account of the movement of individual globules (Figure a). It can be observed by a difference in colour shade of the layers.

It is a reversible process, i.e., cream can be redispersed easily by agitation. This is possible because the oil globules are still surrounded by the protective sheath of the emulsifier. This is a potential step towards complete coalescence of internal phase. Hence, this stage is also considered to be the mark of instability.

In creaming, the drug is not uniformly distributed. This leads to variable dosage. Therefore, the emulsion should be shaken thoroughly before use.

### **Creaming is of two types.**

➤ Upward creaming, this is due to the less denser internal phase (Figure b). This is normally observed in o/w emulsions.

➤ On the other hand, downward creaming is also possible if the internal phase is heavier. Due to gravitational pull, the globules settle down. This is normally the case in w/o emulsions.

Since creaming process involves the movement of globules in an emulsion, Stokes' law can be applied.

### **Therefore, creaming is influenced by:**

- Globule size
- Viscosity of the dispersion medium
- Difference in the densities of dispersed phase and dispersion medium

### **Creaming can be reduced / prevented by:**

1. Reducing the particle size by homogenisation. Doubling the diameter of oil globules increases the creaming rate by a factor of four.



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2. Increasing the viscosity of the external phase by adding the thickening agents such as tragacanth or sodium alginate.

3. Reducing the difference in the densities between the dispersed phase and dispersion medium.

### **Coalescence:**

A few globules tend to fuse with each other and form bigger globules (Figure a). In this process, the emulsifier film around the globules is destroyed to a certain extent. This step can be recognised by increased globule size and reduced number of globules. Coalescence is followed by creaming stage.

### **Coalescence is observed due to:**

- Insufficient amount of the emulsifying agent
- Altered partitioning of the emulsifying agent
- Incompatibilities between emulsifying agents

Phase volume ratio represents the relative volume of water to oil in an emulsion. At higher ratio (>74% of oil to water), globules are closely packed, wherein small globules occupy the void spaces between bigger globules. Thus, globules get compressed and become irregular in shape, which leads to fusion of adjacent globules.

### **Breaking:**

This is indicated by complete separation of oil and aqueous phases (Figure b). It is an irreversible process, i.e., simple mixing fails to resuspend the globules into a uniform emulsion. In breaking, the protective sheath around the globules is completely destroyed.

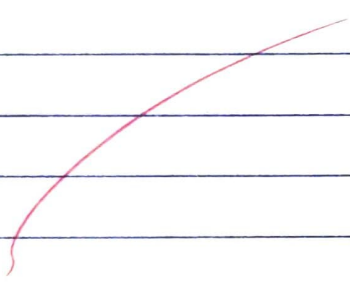
### **Phase Inversion:**

This involves the change of emulsion type from o/w to w/o or vice versa. When we intend to prepare one type of emulsion say o/w, and if the final emulsion turns out to be w/o, it can be termed as a sign of instability.



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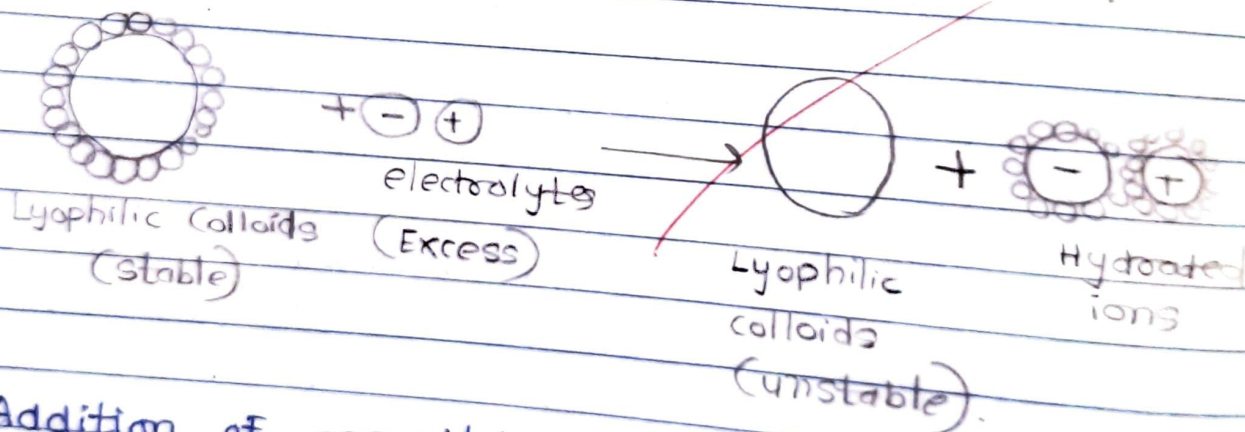
Assignment - I.

- Q. Effect of electrolytes on lyophilic colloids.
  - Q. Protective Action.
  - Q. Heckel's Equation.
  - Q. Plastic Deformation and Elastic deformation.
  - Q. Optical properties of the Colloids.
  - Q. Classification of Colloidal Particles.
- 

## Q.1. Effect of electrolytes on lyophilic Colloids:

### - ① Addition of Excess electrolytes:

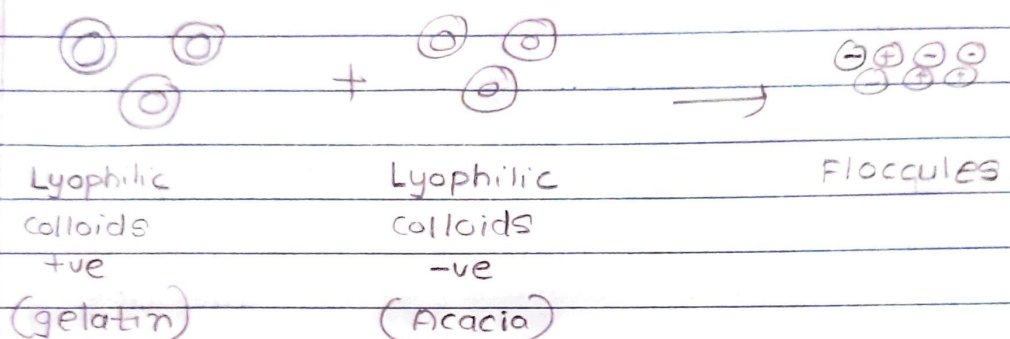
- When the electrolytes are added in less quantity the Zeta potential will decrease. This will hinder the coagulation of the particles.
- Lyophilic colloids are stable colloids because they form a solvent sheath around them.
- But when excess of electrolytes are added, the ions get hydrated due to the presence of excess amount of water & leads to the unstable lyophilic colloids.



### ② Addition of oppositely charged colloids:

- When the lyophilic colloids, when these are mixed with oppositely charged colloids, they form flocules.
- The lyophilic colloids have solvent sheath around them, this prevents them from combining together and hence form stable colloidal dispersion.

- (2)
- These are combined to form flocules by the electrostatic force of attraction between the opposite charges.

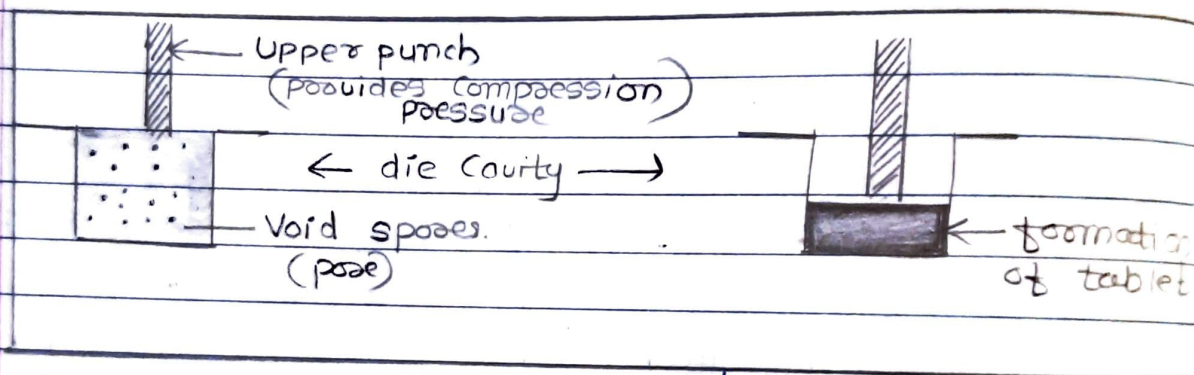


## Q.2 Protective Action:

- The lyophilic colloids are having good solute-solvent interaction i.e. there is good interaction between dispersed phase and dispersion medium.
- These are stable colloids.
- The Lyophobic colloids are unstable. Because there is no good interaction between solute and solvent. There are chances of coagulation.
- So, in order to increase the stability of the lyophobic colloids, the lyophilic colloids are added in excess to lyophobic colloids.
- Then they form a protective layer around the particles of lyophobic colloids by adsorbing on its surface.
- This prevents the coagulation of the Lyophobic particles.
- As the entire colloids behave like Lyophilic colloids & make the system thermodynamically stable.

### Q.3) Heckel's Equation:

- Heckel's equation is the most useful method for estimation of volume reduction under the compression pressure.



- It obeys / follows the 1<sup>st</sup> order kinetics where the pores of the powder acts as reactant and the densification of the powder acts as product.
- The Heckel's plot can be affected by 3 parameters:
  - (i) Time of Compression:
    - The more the time taken the more will be the value of  $k$  on the plot.
  - (ii) Degree of Lubrication:
    - The more the lubrication, the more force will be required to give definite shape and size to the body.
  - (iii) Size of die cavity:
    - The more the size of die cavity, the more force will be required to compress.
- The Heckel's equation is used to estimate / study tablet compression parameters.

soft & plastic

- The Heckel's equation is expressed as;

$$\ln \frac{1}{(1-D)} = kP + A$$

Where; D = Relative density of the tablet.

A = Constant.

k = Slope of straight line

P = Pressure.

- Applications:

- It is used to study the porosity of powder.

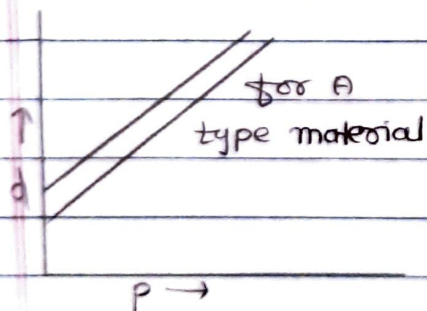
$$\text{porosity} = \frac{(V_p - V)}{V_p}$$

$V_p$  = Vol<sup>m</sup> of any applied load

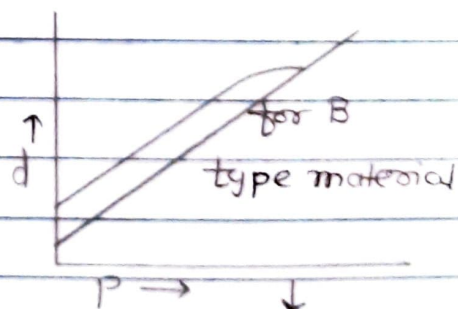
$V$  = Vol<sup>m</sup> of theoretical zero porosity.

- The more will be the value of k, hardness of the tablet.
- The information helps in binder selection for designing the tablet.
- The crushing strength of the tablet can be correlated with the value of k on 'Heckel's Plot'.

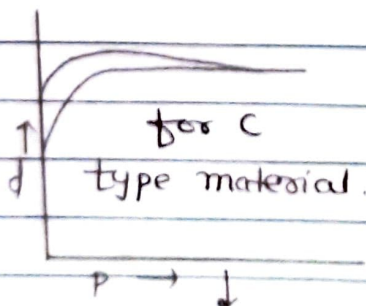
- Heckel's Plot:



soft & readily undergo plastic deformation.



seen in harder material



Slowing & initial steep linear region which becomes superimposed & flattened on applied pressure.

Q.4] Plastic deformation and Elastic deformation.

Elastic Deformation	Plastic Deformation
<ul style="list-style-type: none"><li>- The material returns to its original shape &amp; size when the force is removed.</li><li>- It is reversible.</li><li>- Deformation is not permanent.</li><li>- Obey's Hook's law.</li><li>- Ex: Rubbers, polymers</li></ul>	<ul style="list-style-type: none"><li>- The material does not return to its original shape &amp; size when the force is removed.</li><li>- It is irreversible.</li><li>- Deformation is permanent.</li><li>- Does not obey's Hook's law.</li><li>- Ex: Plastics.</li></ul>

(6)

(7)

### Q.5] Optical Properties of the Colloids.

- Optical properties are studied in order to understand size, shape, structure and molecular weight of the colloidal particles.
- Optical properties;
- Tyndall Effect.
- Electron microscopy.
- Ultramicroscopy.
- Light Scattering.
- Turbidity.

① Tyndall Effect: A colloidal solution gives an impression of being homogenous due to the presence of small size dispersed particles.

- These particles are not visible to naked eyes.
- The colloidal solution can be differentiated from the true solution on the basis that colloidal particles scatter the light, while true solution does not show.
- This scattering of light by 'Colloidal Particle' is known as, 'Tyndall Effect'.
- True solutes are very small in size that's why they do not scatter light.
- It is 1<sup>st</sup> observed by 'John Tyndall'.
- Tyndall observed that when a beam of light is passed through the colloidal sol<sup>n</sup>, the light gets illuminated.
- This is known as 'Tyndall Effect'.

## ② Electron microscopy:

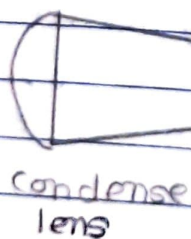
- Used to observe very small particles.
- Used to get the actual particle picture.
- We can identify size, shape, structure of the colloidal particles.
- Electron microscope have very high resolving power.

## ③ Ultra microscopy:

- When the beam of light is passed through the colloidal dispersion against a dark background at right angles, incident light the particles in the form of bright spot appears against the dark background.
- The condensed lens is place in between.
- The beam of light will cross the particle & hence illuminate the particle.
- And we can identify size, shape & structure of the colloidal particles.



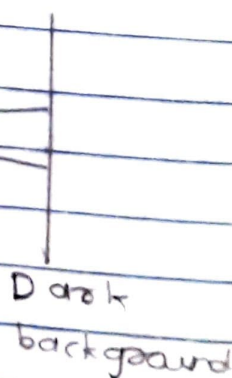
light  
Source



condense  
lens



Colloidal  
Solution



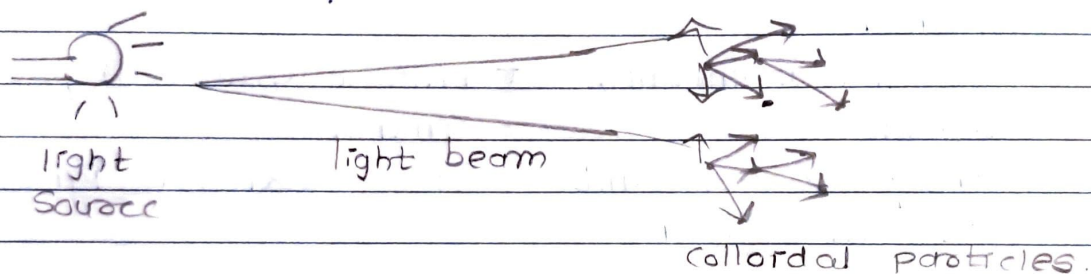
Dark  
background

(8)

(9)

#### ④ Light Scattering:

- Imagine the colloidal particles and a beam of light.
- The beam of light falls on the particles.
- When this happens, the light scatters in different direction.
- The light scatters and spreads to the side particles.
- This helps in estimating the particle size, shape & interaction with the particles.



#### ⑤ Turbidity:

- It depends on molecular weight of the solute particles.
- $\text{Turbidity} \propto \text{conc}^n \text{ of dispersed phase \& molecular weight of the solute particles.}$

Q. 6]

Classification based on the interaction between phases?

Lyophilic Colloids	Lyophobic Colloids
<ul style="list-style-type: none"> <li>- The dispersed phase particles have affinity towards dispersion medium.</li> <li>- Thermodynamically stable.</li> <li>- They do not exhibit 'Tyndall Effect'.</li> <li>- These are also called as '<u>Intrinsic Colloids</u>'.</li> <li>- These colloids are reversible.</li> <li>- Viscosity is greater than dispersion medium.</li> <li>- They may carry little/no charge.</li> <li>- Particles migrate to anode/cathode or not at all.</li> </ul>	<ul style="list-style-type: none"> <li>- They do not have affinity.</li> <li>- Thermodynamically unstable.</li> <li>- They exhibit '<u>Tyndall Effect</u>'.</li> <li>- These are also called as '<u>Extrinsic Colloids</u>'.</li> <li>- Irreversible.</li> <li>- Viscosity is exactly same as that of dispersion medium.</li> <li>- They carry +ve/-ve charge.</li> <li>- They may migrate to anode or cathode.</li> </ul>

1/4/2020

## Assignment - (2)

Q.1 Define and derive Pseudo Order Reaction ?

- 1) The reaction in which one of the reactants is present in large excess.
- 2) It shows an order different from the actual order.
  - 3) The experimental order which is not the actual order then referred to as the pseudo order.
  - 4) As for elementary reactions molecularity and order are identical so pseudo order reaction may also be called pseudo molecular reactions.

Let us consider a reaction



in this reactant B is present in a large excess.

Its rate law can be written as -

$$\text{rate} = k[A][B]$$

as B in the large excess, its concentration remains practically constant in the course of reaction.

So

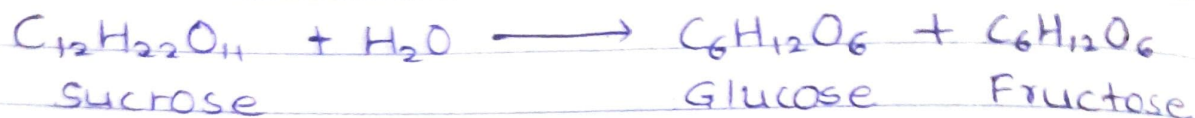
$$\text{rate} = k'[A]$$

when new rate constant  $k' = k[B]$

Thus actual order of the reaction is second order but in practise it will be 1<sup>st</sup> order.

So, the reaction is said to have a pseudo 1<sup>st</sup> order.

### Example:- Hydrolysis of Sucrose



If a large excess of water is present  $[\text{H}_2\text{O}]$  is practically constant,

So, rate law may be written as

$$\text{rate} = k [\text{C}_{12}\text{H}_{22}\text{O}_{11}] [\text{H}_2\text{O}]$$

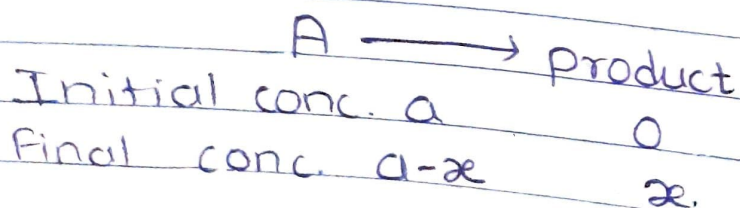
$$\text{rate} = k [\text{C}_{12}\text{H}_{22}\text{O}_{11}]$$

The reaction though of second order is experimentally found to be first order.

Q.2 Define and derive zero order reaction ?

- 1) This one the reaction where the rate does not vary with increase or decrease in the concentration of reactant.
- 2) In a zero order reaction rate is independent of the concentration of the reactants.

Let us consider a zero order reaction.



$$\text{Rate of reaction} = -\frac{d[A]}{dt} = k_0[A]^0$$

$$\frac{dx}{dt} = -\frac{d(a-x)}{dt} = k_0(a-x)^0 = k_0$$

On integration

$$k_0 = \frac{x}{t} \quad \text{or } x = k_0 t$$

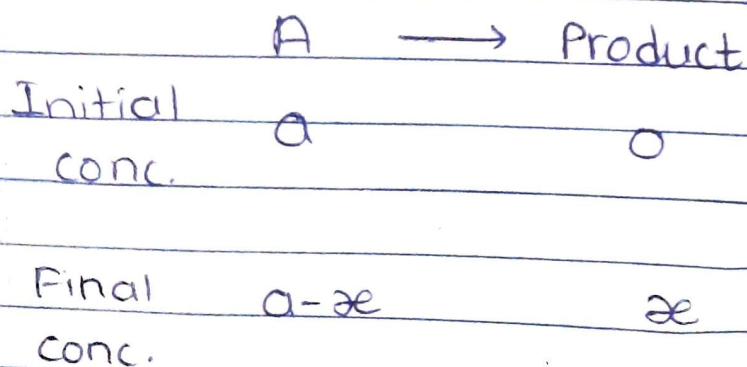
where,  $k_0$  = rate constant of zero order reaction  
unit is concentration per unit time.

In zero order reaction  $\rightarrow$  The rate constant is equal to the rate of reaction at all concentration.

Q.3 Define & derive the first order reaction?

$\rightarrow$  i) According to first order reaction the rate of reaction depends on the concentration of only one reactant.

ii) Let us consider a first order reaction



So for a first order reaction

$$\text{rate} = \frac{dx}{dt} = k[A]$$

$$\frac{dx}{dt} = k[a-x]$$

$$\frac{dx}{a-x} = k dt \quad \text{--- ①}$$

Integration of expression -

$$\int \frac{dx}{a-x} = \int k dt$$

$$-\ln(a-x) = kt + I \quad \text{--- ②}$$

where  $I$  = constant of integration

The constant  $k$  may be evaluated by putting  
 $t=0$  and  $x=0$

$$I = -\ln a$$

substituting  $I$  in equation ②

$$-\ln(a-x) = kt - \ln a$$

$$-\ln(a-x) + \ln a = kt$$

$$\ln \frac{a}{a-x} = kt$$

$$\therefore k = \frac{1}{t} \ln \frac{a}{a-x}$$

changing into common log.

$$k = \frac{2.303}{t} \log \frac{a}{a-x}$$

The value of  $k$  can be found by putting the value of  $a$  and  $(a-x)$  determined experimentally at time interval  $t$ .

Some times the integration rate law in following form

$$k = \frac{2.303}{t_2 - t_1} \log \frac{a-x_1}{a-x_2}$$

Q4. Define and derive the second order reaction?

→ i) When the rate of reaction depends in the concentration of reactant two  $A$  &  $B$  with each term raised to the first power, the reaction is said to be second order.

ii) Consider a reaction



The rate law w.r.t. both the reactant is expressed as

$$-\frac{d[A]}{dt} = -\frac{d[B]}{dt} = k_2 [A][B]$$

$a$  &  $b$  are initial concentration of reactant  $A$  &  $B$

$x$  is the concentration of each reactant in time  $t$

$$\frac{d\alpha}{dt} = k_2 (a-\alpha)(b-\alpha)$$

Integrating the following equation.

$$\frac{d\alpha}{dt} = k_2 (a-\alpha)^2$$

$$k_2 \int_{\alpha=0}^{t=1} dt = \int_{\alpha=0}^{\alpha=\alpha} \frac{d\alpha}{(a-\alpha)^2}$$

$$k_2 dt = \left[ \frac{1}{(a-\alpha)} \right]^\alpha$$

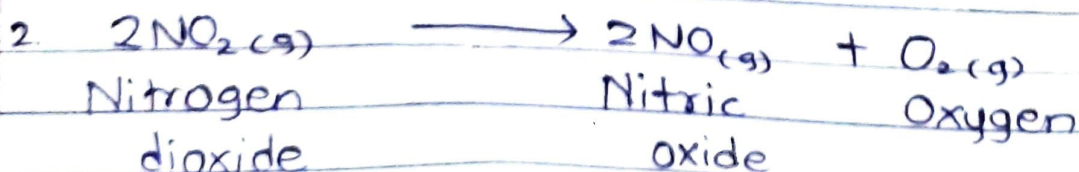
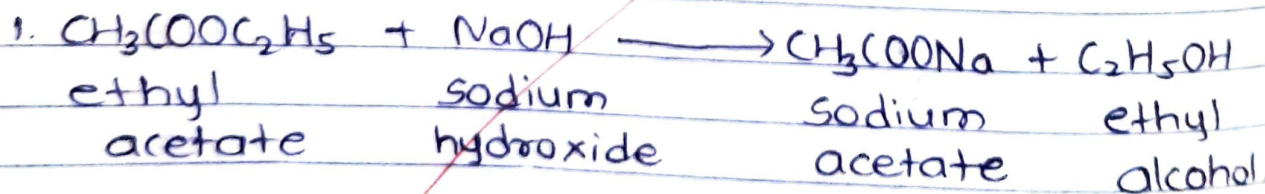
$$k_2 (t-0) = \frac{1}{a-\alpha} - \frac{1}{a-0}$$

$$k_2 t = \frac{\alpha}{a(a-\alpha)}$$

$$k_2 = 1$$

$$\therefore k_2 = \frac{1}{t} \times \frac{\alpha}{a(a-\alpha)}$$

eg





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	Musale Dhananjay Narendra	D. S. Y. B. Pharm			
	Nikam Unnati Sahebrao	D. S. Y. B. Pharm			
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	Ansari Eram Tajamulhaq	S. Y. B. Pharm			
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	Nangare Vinayak Baban	F. Y. Bpharm			
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	Somvanshi Trupti Rajendra	F. Y. Bpharm			
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	Phalke Vishal	T. Y. B.Pharm			
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	Sadaphal Omkar	T. Y. B.Pharm			
	Salunkhe Shubham	T. Y. B.Pharm			
	Shelke Jayashree Ashok	S. Y. B.Pharm			
	Shelke Yash Bapusaheb	S. Y. B.Pharm			



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	Surule Gaurav Haribhau	S.Y.B.Pharm			
	Tambe Akanksha Sunil	S.Y.B.Pharm			
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	Rane Prashant Mangalsing	S.Y.B.Pharm			
	Rapol Mayuri Raju	S.Y.B.Pharm			
	Salunke Sampada Santosh	S.Y.B.Pharm			
	Salve Pratik Sanjay	S.Y.B.Pharm			
	Thorat Kaushal	T.Y.B.Pharm			
	Thorat Nikita Vilas	S.Y. M.Pharm			
	Tribhuvan Prachi	T.Y.B.Pharm			
	Tupe Sakshi	T.Y.B.Pharm			
	Ubale Shweta Rajkumar	S.Y. M.Pharm			
	Wani Abhay Bhimashankar	Final B.Pharm			
	Warale Anurag Appasaheb	Final B.Pharm			
	Warhade Vaishnavi Ramesh	Final B.Pharm			
	Wade Saurabh Sanjay	F.Y.Bpharm			
	Rathod Pooja Motilal	F.Y.M.Pharm			
	Shaikh Shabnam Babu	F.Y.M.Pharm			
18	Dighe Rutuja Chandrabhan	Final B.Pharm	Mrs. H. S. Bhawar	19	
	Gholap Samiksha Anil	Final B.Pharm			
	Handal Suvarna Bajrao	Final B.Pharm			
	Kanore Vaishnavi	T.Y.B.Pharm			
	Kardile Vaishnavi	T.Y.B.Pharm			
	Kawade Sakshi	T.Y.B.Pharm			
	Pawar Tanishka Anil	S.Y.B.Pharm			
	Pawar Trupti Yogesh	S.Y.B.Pharm			
	Pawar Vaishnavi Bhaskar	S.Y.B.Pharm			
	Shirsath Priti Raju	S.Y. M.Pharm			
	Thakre Shital Balasaheb	S.Y. M.Pharm			
	Sonawane Ketan Laxman	F.Y.Bpharm			



	Soni Gauri Shivdas	F. Y. Bpharm			
	Surawase Neha Anil	F. Y. Bpharm			
	Ghogare Rutuja Chandrakant	F. Y. M. Pharm			
	Ghorpade Hrishikesh Suryabhan	F. Y. M. Pharm			
	Kolhe Piyusha Vasant	F. Y. M. Pharm			
	Nalawade Anurag Krishna	F. Y. M. Pharm			
	Nirmal Sujata Eknath	F. Y. M. Pharm			
19	Karwa Sejal Manoj	Final B. Pharm	Ms. K. V. Dhamak	18	
	Kawade Madhuri Suresh	Final B. Pharm			
	Kharat Priyanka Sanchit	Final B. Pharm			
	Pande Akshay	Final B. Pharm			
	Sangale Pratiksha Prabhakar	S. Y. B. Pharm			
	Sapte Vikas	T. Y. B. Pharm			
	Satpute Dnyaneshwari Rajkumar	S. Y. B. Pharm			
	Shaikh Moin Rajmhammad	S. Y. B. Pharm			
	Shaikh Sahirish	T. Y. B. Pharm			
	Shejul Deepak	T. Y. B. Pharm			
	Tambe Sonali Balasaheb	S. Y. M. Pharm			
	Tanpure Rushikesh Raosaheb	S. Y. M. Pharm			
	Karanjekar Vipul Ashok	F. Y. M. Pharm			
	Khemnar Priyanka Ramdas	F. Y. M. Pharm			
	Khemnar Priyanka Ramdas	F. Y. M. Pharm			
	Prerana Sharad Musale	F. Y. M. Pharm			
	Sagar Priyanka Macchindra	F. Y. M. Pharm			
	Satpute Ajay Dashrath	F. Y. M. Pharm			
20	Kharde Sonal Sanjay	Final B. Pharm	Ms. R. D. Ghogare	17	
	Khedkar Harshada Jagdish	Final B. Pharm			
	Mahale Gayatri Shivdas	Final B. Pharm			
	Parjane Shraddha Ranjan	Final B. Pharm			
	Patil Pooja Mohan	Final B. Pharm			
	Shinde Priyanka Krishna	S. Y. M. Pharm			
	Shinde Tejashri Sunil	S. Y. M. Pharm			
	Tambe Nikita Machindra	S. Y. B. Pharm			
	Tambe Pornima Ramdas	S. Y. B. Pharm			
	Thete Bhakti Sharad	S. Y. B. Pharm			
	Vahadane Ruchika Sheshrao	S. Y. B. Pharm			
	Vani Saiprasad	T. Y. B. Pharm			
	Vikhe Anushka	T. Y. B. Pharm			
	Vikhe Sarika	T. Y. B. Pharm			
	Waghchaure Akshada Govind	S. Y. M. Pharm			



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	Tupe Arpita Vaibhav	F. Y. M. Pharm			
	Walave Ashwini Rajendra	F. Y. M. Pharm			
21	Gaikwad Aditya Shivaji	S. Y. B. Pharm	Mr. M. H. Kolhe	19	
	Gaikwad Nikita Prakash	S. Y. B. Pharm			
	Gajare Asawari Sham	S. Y. B. Pharm			
	Joshi Rohit	T. Y. B. Pharm			
	Kadam Suraj	T. Y. B. Pharm			
	Kakade Kishori	T. Y. B. Pharm			
	Khemnar Chhaya Sopan	S. Y. M. Pharm			
	Markad Manjusha Harishchandra	S. Y. M. Pharm			
	Paradhi Amol Vishnu	Final B. Pharm			
	Randive Rohan Balkrishna	Final B. Pharm			
	Risbud Ved Shriram	Final B. Pharm			
	Jawale Akshada Ashok	F. Y. B. Pharm			
	Jondhale Nikita Machhindra	F. Y. B. Pharm			
	Jondhale Tejal Ankush	F. Y. B. Pharm			
	Kale Shraddha Pralhad	F. Y. B. Pharm			
	Kamble Rutuja Shashikant	F. Y. B. Pharm			
	Karande Pradip Balshiram	F. Y. B. Pharm			
	Kachare Akshay Balu	F. Y. M. Pharm			
	Kanawade Shubham Narayan	F. Y. M. Pharm			

**Principal**



## MENTOR GUIDELINES AND CODE OF CONDUCT

Mentoring is not a panacea for all the problems and issues related to personal and professional life of your mentee and his/her family. The essence of mentoring is the sustained human relationship. Your commitment and dedication to your mentee may be the most profound opportunity that you experience. The quality of the relationship you build directly influences the life and future of your mentee.

Please exert every effort to maintain **professional standards**, improve your mentor skills, and exercise good judgment when engaged in any activity involving your mentee.

**As a mentor you are a: POSITIVE ROLE MODEL AND CAREER COUNSELOR.**

Please read carefully, the following guidelines and your roles as a mentor-

1. At the initial stages, your mentee may appear to be hesitant, unresponsive, and unappreciative of the mentor-mentee relationship. This guarded attitude is simply a manifestation of his/her insecurity about the relationship. The mentee's attitude will gradually take a positive turn as he/she realizes your sincerity about being a good guide in terms of mentor.
2. Like any other relation mentor-mentee relationship has an initial phase. During this phase the mentee is more interested in getting to know how "real" you are and how much he/she can trust you. So give adequate time to buildup the mutual faith and trust.
3. Establish how you can reach your mentee: by phone, e-mail, or at a designated meeting location like class room/ tutorial room (most preferred). As far as possible all meetings should be scheduled in advance and should be in notice to the HOD/Principal.
4. **Don't try to be teacher, parent, disciplinarian and psychotherapist during mentor mentee meetings.**
5. Don't criticize or preach. Think of ways to solve the problem together rather than lecturing or telling the mentee what to do. **Never have a negative attitude towards your mentee.**
6. Respect the uniqueness and honor the integrity of your mentee and influence him/her through constructive feedback.
7. **Always explore positive and negative consequences of each and every point/matter/issue.**



8. Be encouraging not demanding. There is a big difference between *encouraging* and *demanding*. Encourage your mentee to complete his/her education and pursue higher learning or professional goals; provide access to varying points of view.
9. Assist your mentee in making the connection between his/her actions of today and the dreams and goals of tomorrow. Don't get discouraged if the mentee isn't turning his/her life around or making great improvements.
10. As a teacher cum guide you can share and advise, but know your limitations. **NEVER BE VERY PERSONAL AND SHARE PERSONAL ISSUES. YOU SHOULD PREFERABLY INTERACT WITH YOUR MENTEES IN A GROUP.**
11. Problems that your mentee may share with you regarding substance abuse, molestation and physical abuse are best handled by professionals. If you have any concerns, contact the higher authorities immediately.
12. Be supportive of the parent, even when you may disagree. Don't take sides or make judgments concerning any family conflict or situation. **Leave the parenting to the parent.**
13. There may be instances when your mentee's behavior is unacceptable. Explain to your mentee why you find his/her behavior unacceptable. Don't forget to inform the parent about the steps you took and why you took them.
14. Never use abusive or unprofessional language.
15. Avoid arguments with your mentees.
16. As far as possible female faculty should be the mentor for female students.
17. Always keep record in support of your all actions of mentor mentee programme.
18. Never use alcohol, tobacco or drugs and share your personal things with your mentee.
19. **Entertainment is not the focal point of your relationship. Do not spend an exorbitant amount of money for activities like birthday presents, parties etc.**



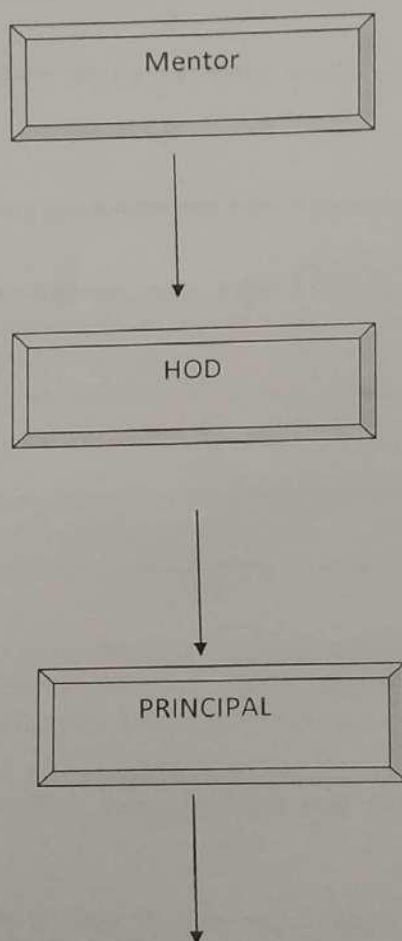
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PRAVARA RURAL COLLEGE  
OF PHARMACY

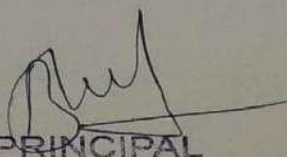
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20. Be sure you have parental approval for all activities apart from routine academic activities.

21. If you have a concern you feel is beyond your ability to handle, feel free to contact the higher authorities. Never feel helpless or hopeless.

**FLOWCHART FOR ADDRESSING MAJOR ISSUES BY MENTOR**



  
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### Mentor Mentee Ratio 2021-2022

Year	No of Student Enrolled in last Year	No of full time ratio	Mentor: Mentee Ratio
2021-2022		24	1:15



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Pravara Rural Education Society's  
**Pravara Rural College of Pharmacy,**  
Pravaranagar, Tal. Rahata, Dist Ahmednagar



# MENTOR BOOKLET



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Pravaranagar, A/p.Loni-413 736



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Pravara Rural College of Pharmacy, Pravaranagar

I. Bio-data to be filled by mentee

Programme: B-Pharm. Admission Year: 2019-20.

Name of Student: Nimbalkar Stuti Abhay.

Father's Name: Nimbalkar Abhay waman.

Mother's Name: Nimbalkar Sunita Abhay.

Father's Occupation:

Mother's Occupation: Nurse

Address for Correspondence (Change in address to be updated immediately)

a) Local: Engineering girls hostel, North campus, Loni.

b) Permanent: Ganma Nagari, Sanjivani, Kopergaon.

Phone / Mobile (Res.): 9823852955 Mobile: 9860658117.

Email: stutiniimbalkar13@gmail.com.

Marital Status: ~~Married~~ / Unmarried

Blood Group: O+ve. Date of Birth: 13 July 2001

In case of emergency please call contact No.: 9860658117.

(Name: Nimbalkar Sunita Abhay Relation: Mother.)

Work Experience (If any): -

Languages known: English, Hindi, Marathi.

Native place: Kopergaon.



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Dist. / State: ..... Maharashtra .....

Committee Member of: .....

Sr. No.	Examination	University / Board	Specialization	Medium	Year of Passing	Percentage
1	S.S.C.	CBSE			2017	89%
2	H.S.C.	state board			2019	70%
3	Others (If any)					
4						

Hobbies: ..... Dancing , singing , writing .....

Goal / Aspirations / Dreams: ..... To work in a reputed research institute of drugs .....

## II. Close Friends: (Any two)

1. Name & Add.: ..... Kotkar Pratikeha Santosh .....

Mobile No.: ..... 9623832744 ..... Email Id.: ..... pratikehakotkar123@gmail.com .....

2. Name & Add.: ..... Shinde Dipali Bapurao .....

Mobile No.: ..... 8766780917 ..... Email Id.: ..... dipalishinde6000@gmail.com .....

3. Name & Add.: ..... Binage Asmita Ashok .....

Mobile No.: ..... 8530156680 ..... Email Id.: ..... asmitabinage@gmail.com .....



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### III. Mentee Health Details:

Any Allergies: No,

Any preexisting medical condition:

No,

### IV. Special Achievement (In the Institute):

Strengths: Good reading skills & grasping power & can explain good.

Weakness: self-confidence.

Pursuing any other course: -

Appeared for any Competitive Exams: -

(Month / Year): -



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V. Final Placement (If done during the eighth semester):

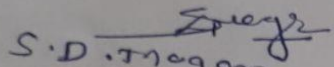
Preferred Industry: .....

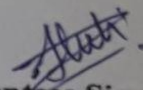
Preferred Location: .....

If selected from campus: Company's Name: .....

Package offer received: .....

Working location: .....

  
S.D. Nagar  
Mentor's Name & Signature

  
Mentee's Signature







Observation of Mentor on the counseling & visible changes

Sr. No.	Date	Problems faced by Mentee	Counseling in respect of Problem	Changes observed	Initial of Mentor
1.	08/8/19	- Drinking water issue in hostel	- Discuss with Principal & Informing Rector	- problem resolved	SDM
2.	10/10/19	- Arrange Expert lecture for PG us.	- Discuss with Principal Academic Ec	- Expert lecture was arranged	SDM
3.	5/2/20	- Arrange Sports & Cultural events for us	- Discuss with Principal & Committee	- Activity was planned	SDM
4.	06/3/2020	No problem	-	-	SDM
5	10/8/20	Provide study material & PPT for study	- Discuss with principal & Academic Ic	provided	SDM
6	5/10/20	- Due to Network issue lecture are not connected <del>at</del> as waiting room enabled	- Discuss with Principal & Academic Ic	- Staff are informed to disable waiting room during lectures.	SDM
7	10/02/21	No issue	-	-	SDM

Note: If the progress of mentee is normal & positive a formal report is not insisted.



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Observation of Mentor on the counseling & visible changes

Sr. No.	Date	Problems faced by Mentee	Counseling in respect of Problem	Changes observed	Initial of Mentor
8	20/4/21	Provides mcq's for exam practices	discuss with principal & Academic IC	- provided	SDM
9	13/12/21	provide model question papers for practice.	discussed with subject teachers.	provided.	SDM
10	22/1/21	Provide notes.	discussed with teachers.	provided.	SDM
11	20/4/21	Arrange more Industrial visit.	discuss with Principal & TPC Incharge	Planning to Arrange in coming semester.	SDM.
12	12/10/21	Need time for GPAT study.	discuss with principal.	provided	SDM.

Note: If the progress of mentee is normal & positive a formal report is not insisted.



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Academic Progress Monitoring Report: Dec. 2019 - 20 sem I

Sr. No.	Year / Semester	Subject Name	Observation SL/AL	Rectification measures taken	Signature of mentee	Signature of Parent
1.	2018 sem-I	HUMAN anatomy & physiology - I.	AL			
2.	2018 sem-I	pharmaceutical analysis - I.	AL			
3.	2018 sem-I	pharmaceutics - I.	AL			
4.	2019 sem-I	pharmaceutical inorganic chemistry	AL			
5.	2019 sem-I	communication skills.	AL			
6.	2019 sem-I	remedial mathematics.	AL			

SL: Slow Learner; AL: Advanced Learner

Any other issue which requires special attention/counseling:

Sr. No.	Year / Semester	Issue	Whether referred to in any committee	Rectification measures taken	Signature of mentee	Signature of Parent



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Academic Progress Monitoring Report: 2019-20 Sem-II

Sr. No.	Year / Semester	Subject Name	Observation SL/AL	Rectification measures taken	Signature of mentee	Signature of Parent
1	3 <sup>rd</sup> / 2019-20	HAD-II	AL			
2		POC-I	AL			
3		Biochemistry	AL			
4		Pathophysiology	AL			
5		Computer Application in Pharmacy	AL			
6		RVS	AL			

SL: Slow Learner; AL: Advanced Learner

Any other issue which requires special attention/counseling:

Sr. No.	Year / Semester	Issue	Whether referred to in any committee	Rectification measures taken	Signature of mentee	Signature of Parent





Academic Progress Monitoring Report: 2020-21 Sem-III

Sr. No.	Year / Semester	Subject Name	Observation SL/AL	Rectification measures taken	Signature of mentee	Signature of Parent
1	Sem III	P. Oc. III	AL		<i>[Signature]</i>	<i>[Signature]</i>
2		PP- T	AL		<i>[Signature]</i>	<i>[Signature]</i>
3		P. micro	AL		<i>[Signature]</i>	<i>[Signature]</i>
4		P. E	AL		<i>[Signature]</i>	<i>[Signature]</i>

SL: Slow Learner; AL: Advanced Learner

Any other issue which requires special attention/counseling:

Sr. No.	Year / Semester	Issue	Whether referred to in any committee	Rectification measures taken	Signature of mentee	Signature of Parent



*[Signature]*

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Pravaranagar, A/p. Loni-413 736



Academic Progress Monitoring Report: 2020-21 sem-IV

Sr. No.	Year / Semester	Subject Name	Observation SL/AL	Rectification measures taken	Signature of mentee	Signature of Parent
1	sem IV	POC II	AL		<i>[Signature]</i>	<i>[Signature]</i>
2		MC F	AL		<i>[Signature]</i>	<i>[Signature]</i>
3		PP II	AL		<i>[Signature]</i>	<i>[Signature]</i>
4		P'colur - I	AL		<i>[Signature]</i>	<i>[Signature]</i>
5		P'cognosy. Pyto chemy. F	AL		<i>[Signature]</i>	<i>[Signature]</i>

SL: Slow Learner; AL: Advanced Learner

Any other issue which requires special attention/counseling:

Sr. No.	Year / Semester	Issue	Whether referred to in any committee	Rectification measures taken	Signature of mentee	Signature of Parent



*[Signature]*

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Pravaranagar, A/p.Loni-413 736



Academic Progress Monitoring Report: V

Sr. No.	Year / Semester	Subject Name	Observation SL/AL	Rectification measures taken	Signature of mentee	Signature of Parent
1.	<u>IV</u>	Pharmacology II.	AL		<i>[Signature]</i>	<i>[Signature]</i>
2.	<u>V</u>	Med. chem II.	AL		<i>[Signature]</i>	<i>[Signature]</i>
3.	<u>IV</u>	Pharmacology II.	AL		<i>[Signature]</i>	<i>[Signature]</i>
4.	<u>IV</u>	Industrial pharmacy II.	AL		<i>[Signature]</i>	<i>[Signature]</i>
5.	<u>V</u>	Pharmaceutical Jurisprudence.	AL		<i>[Signature]</i>	<i>[Signature]</i>

SL: Slow Learner; AL: Advanced Learner

Any other issue which requires special attention/counseling:

Sr. No.	Year / Semester	Issue	Whether referred to in any committee	Rectification measures taken	Signature of mentee	Signature of Parent



*[Signature]*



Academic Progress Monitoring Report: VI 2021-22

Sr. No.	Year / Semester	Subject Name	Observation SL/AL	Rectification measures taken	Signature of mentee	Signature of Parent
1.	III <sup>rd</sup> yr.	Medicinal chemistry III.	AL		<i>Muto</i>	<i>Anu</i>
2.	III <sup>rd</sup> yr.	Pharmacology III.	AL		<i>Shub</i>	<i>Anu</i>
3.	III <sup>rd</sup> yr.	Herbal drug technology.	AL		<i>Shub</i>	<i>Anu</i>
4.	III <sup>rd</sup> yr.	Biopharmaceutics & P kinetics.	AL		<i>Shub</i>	<i>Anu</i>
5.	III <sup>rd</sup> yr.	P' biotechnology.	AL		<i>Shub</i>	<i>Anu</i>
6.	III <sup>rd</sup> yr.	P' quality Assurance.	AL		<i>Shub</i>	<i>Anu</i>

SL: Slow Learner; AL: Advanced Learner

Any other issue which requires special attention/counseling:

Sr. No.	Year / Semester	Issue	Whether referred to in any committee	Rectification measures taken	Signature of mentee	Signature of Parent



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Academic Progress Monitoring Report: VII

Academic Progress Monitoring Report

Sr. No.	Year / Semester	Subject Name	Observation SL/AL	Rectification measures taken	Signature of mentee	Signature of Parent
1.	IV yr	IP-II	AL		<i>[Signature]</i>	
2.	IV yr	IMA	AL		<i>[Signature]</i>	
3.	IV yr	PP	AL		<i>[Signature]</i>	
4.	IV yr	NDDS	AL		<i>[Signature]</i>	

SL: Slow Learner; AL: Advanced Learner

Any other issue which requires special attention/counseling:

Sr. No.	Year / Semester	Issue	Whether referred to in any committee	Rectification measures taken	Signature of mentee	Signature of Parent



*[Signature]*

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Pravaranagar, A/p.Loni-413 736

### Competitive Exam Guidance June 2021-Dec 2022

Sr.No	Date	Name of the Expert	Organization	No of Students	Topic
1	16.08.2021	Mr.Aakash Nathani	Pharm Elite, Mumbai	UG-104	“Strategy for GPAT & NIPER Preparation”
2	18.09.2021	Mr.Vikrant Dhamak	Dr. VVPF, College of Pharmacy, Viladghat, A.Nagar.	UG-100	“GPAT & NIPER Preparation 2022”
3	11.12.2022	Mr. Harshad Jadhav	Astra zenca AB, Swedan	UG-106	“Tips & Tricks to crack GPAT & NIPER 2022”
4	25.01.2022	Dr. Machhindra Bochara	Academy of NIPER Aspirants	UG-230	“GPAT & NIPER preparation 2022”
5	25.03.2022	Mr. Shivprasad Tengale	SRTM, Nanded University	UG-40	Tricks to solve GPAT paper
6	27.04.2022	Mr. Sagar Hange	The Infinity Academy, Nashik	UG -100	Seminar on “Preparation of Competitive Exam MPSC/UPSC



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Pravar Nagar, A/p.Loni-413 736



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PRAVARANAGAR**

*Appreciation Certificate*

This is to certify that Mr./Ms. Jyotom Kanhan Kishor  
of First/Second/Third/Final Year M. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

Mrs. Surayana Vikhe  
Academic Incharge

Mr. Mayur S. Bhosale  
Sport Incharge

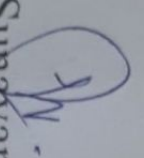
Dr. Sanjay B. Bhawar  
Principal





**PRAVARA RURAL COLLEGE OF PHARMACY,  
PRAVARANAGAR**

*Appreciation Certificate*

This is to certify that Mr./Ms. Shingote Vishakha Shonko  
of First/Second/Third/Final Year B1. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Sunayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal




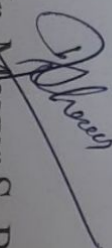
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PRAVARANAGAR**

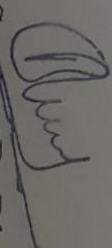


*Appreciation Certificate*

This is to certify that Mr./Ms. Vikhe Ashrika Ganjay (M.Pharm)  
of First/Second/Third/Final Year M. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Sunayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal



# Appreciation Certificate

**Dr. Sanjay B. Bhawar**  
**Principal**



# Appreciation Certificate

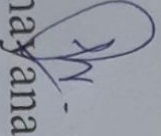
**Dr. Sanjay B. Bhawar**  
**Principal**

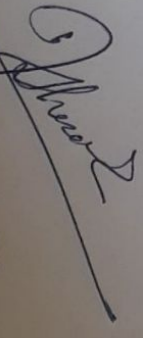


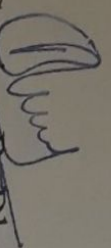
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PRAVARANAGAR**

*Appreciation Certificate*

This is to certify that Mr./Ms. Kashid shvradha Maresh  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Sunayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal

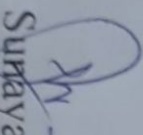


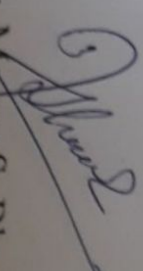
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PRAVARANAGAR**

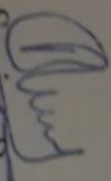


## *Appreciation Certificate*

This is to certify that Mr./Ms. Vijaymal Galkrishna  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Sunayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal

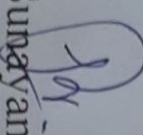


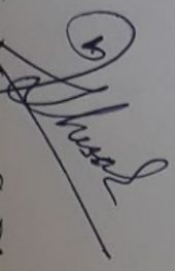
**PRAVARA RURAL COLLEGE OF PHARMACY,  
PRAVARANAGAR**




## *Appreciation Certificate*

This is to certify that Mr./Ms. Tambe Tejeshri Laxmon  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Sunayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal

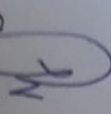


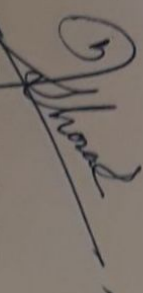
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PRAVARANAGAR**

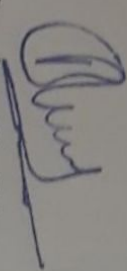


## *Appreciation Certificate*

This is to certify that Mr./Ms. Karva Sejal Manoj  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Supayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

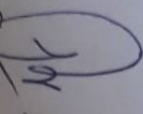
  
Dr. Sanjay B. Bhawar  
Principal

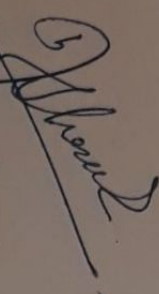



**PRAVARA RURAL COLLEGE OF PHARMACY,  
PRAVARANAGAR**

*Appreciation Certificate*

This is to certify that Mr./Ms. Tathe Chetan Goganan  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Senayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal

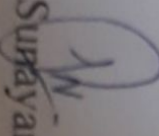


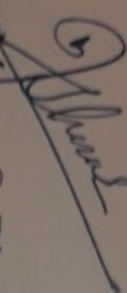
**PRAVARA RURAL COLLEGE OF PHARMACY,  
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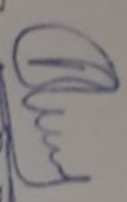


## *Appreciation Certificate*

This is to certify that Mr./Ms. Shrini Dipak Donohrogo  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Surayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal

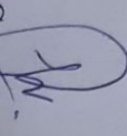


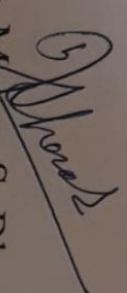
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PRAVARANAGAR**




*Appreciation Certificate*

This is to certify that Mr./Ms. Dorkunde Rahul Sukhdev  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

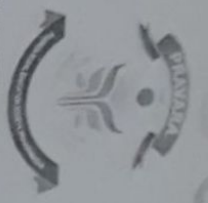
  
Mrs. Sudayana Vilkhe  
Academic Incharge

  
Mr. ~~Mayur~~ S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal



**PRAVARA RURAL COLLEGE OF PHARMACY,  
PRAVARANAGAR**



*Appreciation Certificate*

This is to certify that Mr./Ms. Kangude Dnyando Houshobpy  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

Mrs. Sunayana Vikhe  
Academic Incharge

Mr. Mayur S. Bhosale  
Spqrt Incharge

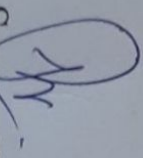
Dr. Sanjay B. Bhawar  
Principal

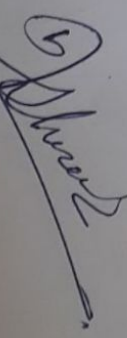


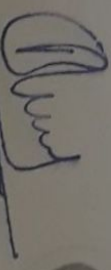
**PRAVARA RURAL COLLEGE OF PHARMACY,  
PRAVARANAGAR**

*Appreciation Certificate*

This is to certify that Mr./Ms. Salunke Sompada Sontosh  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Sudayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

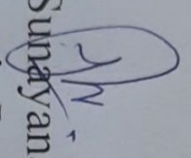
  
Dr. Sanjay B. Bhawar  
Principal

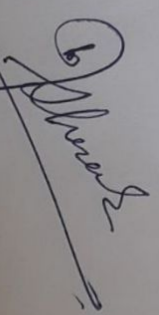


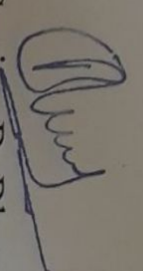
**PRAVARA RURAL COLLEGE OF PHARMACY,  
PRAVARANAGAR**

***Appreciation Certificate***

This is to certify that Mr./Ms. Ghule Rupali Mahadev  
of First/Second/Third/Final Year B. Pharm have performed excellent in  
Academic/Sports/Extra Curricular Activities for Academic Year 2020-21.

  
Mrs. Sunayana Vikhe  
Academic Incharge

  
Mr. Mayur S. Bhosale  
Sport Incharge

  
Dr. Sanjay B. Bhawar  
Principal



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**PRAVARA RURAL COLLEGE**  
**OF PHARMACY**  
**LONI**

### Mini Projects Summary

#### SUMMARY

Academic Year 2021-2022

Sr.No	Name of the Student	Title	Guided By
1	Aghav Sonali Popat	Formulation And Evaluation Of Herbal Face Pack And Face Scrub Of Musa Paradisiaca	Dr. R.K. Godge
2	Antre Kshitija Gokul	Formulation And Evaluation Of Herbal Face Pack And Face Scrub Of Musa Paradisiaca	Dr. R.K. Godge
3	Barhate Shruti Pralhad	Formulation and evaluation of herbal Ointment of Lantana camara Linn.	Dr. S.B Bhawar
4	Bhange Omkar Dilip	Formulation and evaluation of herbal Ointment of Lantana camara Linn.	Dr. S.B Bhawar
5	Bharskar Ganesh Rajaram	Formulation and Evaluation of topical herbal antifungal stick against candida albicans	Mrs. H.S.Bhawar
6	Borude Gauri Balasaheb	Formulation and Evaluation Of Herbal Lip Balm	Mrs. H.S.Bhawar
7	Chavan Saurav Rajendra	Formulation And Evaluation Of Topical Herbal Antifungal Stick Against Candida Albicans	Mrs. H.S.Bhawar
8	Daud Rushikesh Sanjayrao	Formulation And Evaluation Of Polyherbal Anti Aging Cream.	Dr.S.R .Vikhe
9	Gaikar Sahil Anil	Formulation and evaluation of polyherbal anti aging cream.	Dr.S.R .Vikhe
10	Gaikwad Gaurav Gokul	Study of Antibacterial Activity of the leaves of Ficus Religiosa linn	Dr R.S. Jadhav
11	Gholap Samiksha Anil	Formulation and evaluation of herbal roll on and inhaler for common cold associated with headache	Prof. M.H.Kolhe
12	Giri Prasad Sanjay	Formulation and evaluation of herbal roll on and inhaler for common cold associated with headache	Prof. M.H.Kolhe
13	Handal Suvarna Bajirao	Formulation and evaluation of herbal roll on and inhaler for common cold associated with headache	Prof. M.H.Kolhe
14	Jadhav Harshada Dipak	Formulation and evaluation of herbal tablet of Jackfruit Root for assessment of Antiasthmatic activity.	Dr. Suhas Siddheshwar



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15	Jahagirdar Shubham Narendra	Review Study On Solubility Enhancement Of Glimepiride By Solid Dispersion Method Using PEG 6000	Dr. Suhas Siddheshwar
16	Jaitade Pavan Shankar	Enhancement Of Solubility Of Glimepiride Drug Using PEG(Poly Ethylene Glycol)	Dr.S. B. Dighe
17	Jejurkar Prajakta Ravindra	Formulation And Evaluation Of Herbal Tablet Of Jackfruit Bark For Assessment Of Wound Healing Activity	Dr.S D Mankar
18	Kalwaghe Shruti Ashok	Formulation And Evaluation Of Aegle Marmelos Syrup From Fruit	Dr. S.S.Siddheshwar
19	Karande Suyog Suresh	A Review on Anemia	Dr S.B Dighe
21	Karwa Sejal Manoj	Phytochemical Investigation Of Gymnema Sylvestre Leaves	Mr.D. N. Vikhe
22	Kawade Madhuri Suresh	Pharmacological Investigation Of Gymnema Sylvestre Leaves	Mr. D. N. Vikhe
23	Kharat Priyanka Sanchit	Formulation And Evaluation Herbal Ointment Of Nyctanthes-Arbortristis And Clerodendron	Dr.R.S. Jadhav
24	Kharde Sonal Sanjay	Formulation And Evaluation Herbal Ointment Of Nyctanthes-Arbortristis And Clerodendron	Dr.R.S. Jadhav
25	Khedkar Harshada Jagdish	Formulation Of Herbal Ointment Of Clerodendron Serratum For Assessment Of Anti-Inflammatory Activity.	Dr.R.S. Jadhav
26	Kotkar Abhishek Tulshidas	Formulation Of Herbal Ointment Of Nyctanthes Arbortristis And Clerodendron Serratum For Assessment Of Anti Inflammatory	Dr.R.S. Jadhav
27	Kotkar Gayatri Vijay	The Phytochemical Screening & Pharmacognostic Study Of Achyranthes Aspera	Prof. G.S. Shinde
28	Kulsange Payal Suresh	The Phytochemical Screening And Pharmacognostic Study Of Achyranthes Aspera”	Prof. G.S. Shinde
29	Kumbhar Prasad Jaywant	The Phytochemical Screening And Pharmacognostic Study Of Achyranthes Aspera”	Prof. G.S. Shinde
30	Kute Nikhil Shivaji	Biosimilar And It's Current Perspective	Dr. S. D.Mankar
31	Londhe Ashish Kaduba	Herbonanocuticals: A Newer Approach For Delivering Herbal Drugs	Dr. S. D. Mankar
32	Mahale Gayatri Shivdas	Formulation And Evaluation Of Antibacterial Herbal Toothpaste Isolated	Mrs.K.V. Dhamak



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		From Gauva Leaves, Akarkara Leaves, Stevia Leaves.	
33	Mane Ankita Prakash	Formulation And Evaluation Of Herbal Lipstick From Delonix Regia Extract.	Mr. M.S.Bhosale
34	Mane Rushikesh Tarachand	Formulation And Evaluation Of Herbal Lipstick From Delonix Regia Extract.	Mr. M.S.Bhosale
35	Pardeshi Shweta Rajesh	Pharmacognostic, Pharmacological Investigation And Formulation, Evaluation Of Herbal Ointment From Ecliptic Alba Leaves	Miss.R D Ghogare
36	Parjane Shraddha Ranjan	Pharmacognostic, Pharmacological Investigation and Formulation, Evaluation of Herbal Ointment From Ecliptic alba leaves	Miss.R D Ghogare
37	Patil Pooja Mohan	Formulation and evaluation of antibacterial herbal toothpaste isolated from Gauva leaves, Akarkara leaves, Stevia leaves.	Mrs.K. V. Dhamak
38	Ralebhat Vaishnavi Popat	Formulation and evaluation of antibacterial herbal toothpaste isolated from Gauva leaves, Akarkara leaves, Stevia leaves.	Mrs.K. V. Dhamak
39	Randive Rohan Balkrishna	“Isolation And Quantification Of High Quality Genomic DNA From Catharanthus roseus L. Plant By Agarose Gel Electrophoresis”	Dr.A.P.Patel
40	Risbud Ved Shriram	Isolation of high quality DNA from Mentha spicata leaves	Dr. A.P Patel
41	Sadaphal Prajakta Balasaheb	Optimizing DNA isolation from medicinal plant jasminum simbac	Dr.A. P. patel
42	Sadaphal Priya Ashok	Formulation, Evaluation and Antibacterial activity of Herbal Ointment containing Tinospora Cordifolia and Psidium Guajava.	Dr S.B Bhawar
43	Sadaphal Priyanka Anil	Formulation, Evaluation and Antibacterial activity of Herbal Ointment containing Tinospora Cordifolia and Psidium Guajava.	Dr S.B Bhawar
44	Salunkhe Dhanashree Ramrao	Formulation and evaluation of antibacterial herbal toothpaste isolated from Gauva leaves, Akarkara leaves, Stevia leaves.	Mrs.K. V. Dhamak
45	Satpute Pankaj Bhausaheb	Pharmacognosy And Phytochemistry Of Tinospora Cordifolia	Prof. D.N.Vikhe
46	Sayyed Alisha Ansar	Formulation, Evaluation and Antibacterial activity of Herbal Ointment containing Tinospora Cordifolia and Psidium Guajava.”	Dr. S.B. Bawar
47	Shelke Mohini Bhausaheb	A Study of Antibacterial Activity of the leaves of Colocasia Esculenta Linn	Dr.S.D.Mankar



*(Signature)*

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48	Shinde Sonali Minanath	Formulation, Evaluation and Antibacterial activity of Herbal Ointment containing <i>Tinospora Cordifolia</i> and <i>Psidium Guajava</i> .”	Dr. S.B.Bhawar
49	Sonawane Pankaj Prakash	Formulation and evaluation of polyherbal anti aging cream.	Dr.S.R. Vikhe
50	Tambe Tejshri Laxman	Extraction, Formulation and Evaluation of ointment exhibiting anti-microbial activity of <i>Mangifera Indica</i> L. leave extract	Mr.A.S. Dighe
51	Tamboli Avesh Aslam	Extraction, Formulation and Evaluation of ointment exhibiting anti-microbial activity of <i>Mangifera Indica</i> L. leave extract	Mr.A.S. Dighe
52	Tawate Vinod Rajendra	evaluation of herbal extraction of <i>ecilipta alba</i> ointment	Mr.A.S. Dighe
53	Thombare Shailesh Rambhau	Role of markers in Standardization Of Herbal Drugs	Mr.A.S. Dighe
54	Tonde Avishkar Shrikrushna	Herbal Antiacne Face Powder	Mr. S.D. Magar
55	Turkane Arpita Sunil	Herbal Antiacne Face Powder	Mr. S.D. Magar
56	Unde Sahara Balasaheb	Formulation and evaluation of herbal tablet of Jackfruit leaves for assessment of Rheumatoid arthritis activity.	Dr.S D Mankar
57	Vikhe Rahul Balasaheb	Review study on solubility enhancement of Glimepiride by solid dispersion method using PEG 6000	Dr. Suhas Siddheshwar
58	Vikhe Shraddha Rajendra	Formulation and evaluation of aegle marmelos syrup from fruit	Dr. S.S.Siddheshwar
60	Waditake Poonam Dada	Review on <i>Vinca rosea</i> : As an potent Anti-cancer Agent	Mrs.N.M.Wani
61	Waghe Raj Bhikaji	Review on Pomegranate Nutraceutical Benefits of Human Health	Mrs.N.M.Wani
62	Wani Abhay Bhimashankar	Formulation of Polyherbal Cream using extracts of <i>Cymbopogon Citarus</i>	Mr.A.S. Dighe
63	Warale Anurag Appasaheb	TOPOISOMERASE: An Overview	Mr.A.S. Dighe
64	Warhade Vaishnavi Ramesh	A Review On Quality Control And Standardisation Of Herbals.	Mr.A.S. Dighe



*Principal*

Principal  
Pravara Rural College of Pharmacy  
Pravaranagar, A/p.Loni-413 736

## Practice School Project evaluation sheet:

Seminar evaluation / assessment 2021-22 Date: 11/2/2022

Name of Internal Examiner: Name of External Examiner:

Mr. Amul S. Bihre / Dr. S. R. Vihre

Sr. no.	Name of students	Topic	External marks				Internal marks		To (15)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill & soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions (10M)	
1	Paradhi Amul Vishnu	Green chemistry & IT	20	20✓	45	20	15	10	130
2	Paradhi Shweta Rajesh	---	22	22✓	45	20	15	10	134
3	Paradhi Shweta Rajesh	---	22	21✓	45	20	15	10	133
4									
5									

Sign of Internal Examiner

Sign of External Examiner

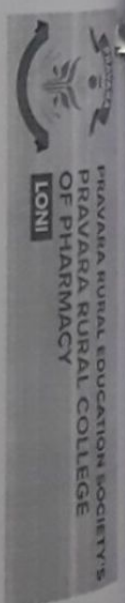
**Practice School Project evaluation sheet:**

**Seminar evaluation / assessment 2021-22**

**Date: 11/02/2022**

**Name of Internal Examiner: Mr. S. D. Magar**

**Name of External Examiner: Mrs. K.V. Dharmak**



Sr. no.	Name of students	Topic	External marks			Internal marks			Total (150 M)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill & soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions (10M)	
1	Rohan Randive	Advance Herbal Technology	19	21 ✓	43	21	12	09	125
2	Ved Rishbud	QA and QC in Pharmaceutical Industry	20	21 ✓	45	20	13	09	128
3	Sadaphol Projakt.	Introduction to Pharmaceutical Analysis	15	18 ✓	39	13	09	06	100
4									
5									
6									

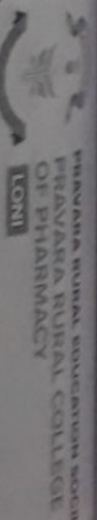
Sign of Internal Examiner

*[Signature]*  
11/02/22

Sign of External Examiner

*[Signature]*

# Practice School Project evaluation sheet:



Seminar evaluation / assessment 2021-22 Date: 11/2/2022

Name of Internal Examiner: Name of External Examiner:

Dr. Surajana R. Vekhe / Mr. Amol S. Dighe.

Sr. no.	Name of students	Topic	External marks				Internal marks		To
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill & soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions (10M)	
1	Patel Ansha mehar	A Review on: A medicative Properties of Ferula Foetida 'HING'.	21	22 ✓	40	20	10	07	120
2	Patelbhat Vaishnavi popat	Herbal Lipstick Formulation & Evaluation	24	23 ✓	44	22	15	09	137
3	patil prajna m.	Advanced Herbal Technology	22	22 ✓	40	22	13	07	126
4	Wani Abhay Bhimashankar	Next Generation Protein: WHEY PROTEIN.	22	23	41	21	10	07	124
5	Waranke Anuregy Apparabha	3D Printing in Pharmaceutical Industry	23	23	44	23	15	09	137

Sign of Internal Examiner

Sign of External Examiner

Practice School Project evaluation sheet:

Seminar evaluation / assessment 2021-22 Date:

Internal examiner : Dr. R. J. Bhor

Name of Internal Examiner: Name of External Examiner:

External examiner : Mr. S. D. Mangar

Sr. no.	Name of students	Topic	External marks				Internal marks		Total (150 M)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill & soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions (10M)	
1	Mamc Ankita	Narcotic & Narcotic addiction treatment	16	21	40	20	12	08	117
2	Nale Sakshi	Hetero alkaloid from plant	12	18	38	15	10	07	100
3	Mame Pushikesh	Imidazole Reversal	16	20	40	15	12	08	111
4									
5									

Sign of Internal Examiner

R. J. Bhor

Sign of External Examiner

S. D. Mangar



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PRAVARA RURAL COLLEGE  
OF PHARMACY  
LONI

Practice School Project evaluation sheet:  
Seminar evaluation / assessment 2021-22

Name of Internal Examiner: Mrs. S. D. Manekar

Date: 11/02/2022

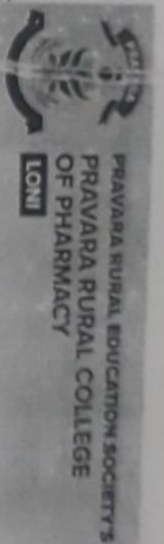
Name of External Examiner: Dr. R. J. Bhor

Sr. no.	Name of students	Topic	External marks				Internal marks		Total (150 M)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill & soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions (10M)	
1	Kute Nikhil Shivaji	Review on Biosimilars its perspective - A review	15	20	40	20	12	08	115
2	Lonhe Ashish Aadulab.	Herbo nanotechnology: A newer approach for delivering herbal drug	10	15	35	15	10	05	90
3	Mahale Gayatri Shivdas	Microsponges drug delivery system - A review	15	20	40	15	12	08	110

Sign of Internal Examiner

Sign of External Examiner

# Practice School Project evaluation sheet:



Seminar evaluation / assessment 2021-22 Date: 11/02/2022

Name of Internal Examiner: Name of External Examiner:

Mr. M.S. Bhosale

External:- Mr. Dattaprasad N. Vithale

Sr. no.	Name of students	Topic	External marks					Internal marks		Total (150 M)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill&soft skill development (50M)	Outcome (25M)	Practical work &Attendance (15)	Student Teacher Interactions(10M)		
1	Ms Tanabe Tejshri Laxman	-A Review on: Therapeutic Activities of spirulina on skin	23	23 ✓	42	14	14	09	135	
2	Mr. Sonawane Parag P.	A Review on: effective Therapeutic Benefits of phytochrome - spirulina plant	22	22 ✓	42	24	14	09	133	
3	Ms. Shinde Sonali, M	A Review: Therapeutic effect of spirulina supplements	20	23 ✓	41	22	14	08	128	
4										
5										

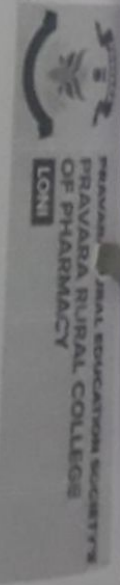
Sign of Internal Examiner

Mr. M.S. Bhosale

Sign of External Examiner

Mr. Dattaprasad N. Vithale

# Practice School Project evaluation sheet:



Seminar evaluation / assessment 2021-22 Date: 11/02/2022  
 Name of Internal Examiner: Name of External Examiner:  
 Internal: Dr. Subas Sideshwar  
 External: Dr. Kiran Kotade.

Sr. no.	Name of students	Topic	External marks				Internal marks		Total (150 M)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill& soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions(10M)	
1	Tejvkar Prayakta	Cosmetic Science .							
2	Jaitade Pawan	Reviews on Phytochemistry & Pciological aspects of <i>Mirabilis jalapa</i> .	20	24	38	23	13	07	125
3	Jahagirdar Shubham	Pharmaceutical Analysis .	19	22	40	22	12	06	121
4	Kole Vishal	—	18	20	36	27.	12	06	119
5			(45)	—	—	—	—	—	—

External : Dr. Kiran Kotade .

Sign of Internal Examiner  
 (Dr. Subas Sideshwar)

Sign of External Examiner  
 (Dr. K. B. Kotade)

## Practice School Project evaluation sheet:

Seminar evaluation / assessment 2021-22

Date: 11/02/2022

Name of Internal Examiner: Mrs. K. V. Dhonat.

Name of External Examiner: Mr. S. D. Magoor.

Sr. no.	Name of students	Topic	External marks				Internal marks		Total (150 M)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill & soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions (10M)	
1	Sadaphoi Praya A.	QA and QC in Pharmaceuticals.	17	19 ✓	43	20	12	9	120
2	Prayankeo Sadaphoi	Advanced Herbal Technology	19	21 ✓	43	20	12	9	124
3	Dhanashree Solunke	Therapeutic activity and uses of Cinnamon on human Health.	18	20 ✓	43	20	12	9	122
4									
5									

Sign of Internal Examiner

Sign of External Examiner

Practice School Project evaluation sheet:  
Seminar evaluation / assessment 2021-22

Name of Internal Examiner: Mr. Dattaprasad N. Vike.

Date: 11/02/2022.

Name of External Examiner: Mr. Mayur B. Bhosale.

Sr. no.	Name of students	Topic	External marks				Internal marks		Total (150 M)
			Methodology adopted (25M)	Presentation of work (25M)	Communication skill & soft skill development (50M)	Outcome (25M)	Practical work & Attendance (15)	Student Teacher Interactions (10M)	
1	Mr. Ashik Mohini	P'cognosic & phyto. study of Conium odacendens, (Gtens)	20	20 ✓	47	22	14	09	132
2	Mr. Gaurav Parthaj Bhawarab	P'cognosic & phyto. study on Tinogpora canifolia (Gtens)	20	20 ✓	46	22	14	09	131
3	Mr. Gaurav Alvoha A.	A review on Rauwolfia serpentina.	15	17 ✓	35	17	10	05	99
4									
5									

Sign of Internal Examiner

(Mr. Dattaprasad N. Vike)

Sign of External Examiner

(Mr. Mayur B. Bhosale)



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**Seminars/Webinars/Training/ Workshops: JUNE 2021-DEC 2022**

<b>Sr. No.</b>	<b>Activities / Event Name</b>	<b>Date /Day</b>	<b>Name of company with Address</b>	<b>Name of experts</b>	<b>Stack holder (student participate ) Branch, Year,</b>	<b>No of Students Participated</b>	<b>Outcome of Event</b>
1	“Strategy for GPAT & NIPER Preparation”	16.08.2021	Pharm Elite, Mumbai	Mr.Aakash Nathani	S.Y, T.Y & Final year B.Pharm	UG-104	Students learn the basics things and how to prepare for GPAT.
2	“Career and Clinical Trials Data Analytics”	04.09.2021	Kite-Ai, Pune	Ms. Gayatri Shardul	T.Y.B.Pharm	UG-104	Students understand the advanced techniques of Clinical Research.
3	“GPAT & NIPER Preparation 2022”	18.09.2021	Dr. VVPF, College of Pharmacy, Viladghat, A.Nagar.	Mr.Vikrant Dhamak	S.Y, T.Y and Final Year.B.Pharm	UG-100	Students know the various tricks to solve GPAT Test.
4.	Career opportunities in Pharmaceutical Industry”	25.09.2021	Smartchem plus, Nashik.	Mr. Amol Gavande	S.Y, T.Y and Final Year.B.Pharm	UG-100	Students aware about the industry & it minimizes the gap between industry & Institution.



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5.	“Workshop on medical coding”	02.10.2021	IKS Healthcare Pvt.Ltd	Mr.Kiran Pawale	T.Y.& Final Year B.Pharm, M.Pharm	UG -90 PG-10	Students seeks the knowledge about medical coding
6.	“Recent advances in Granulation and Tableting technology”	15.10.2021	Alkem Lab Pvt.Ltd	Mr.Samadhan Mhaske	T.Y.& Final & PG.	UG-77	Students seeking knowledge about granulation techniques.
7.	“Biosimilars product development an overview”	23.10.2021	Enzene Bioscience Ltd	Mr.Prashant Kshirsagar	T.Y.& Final Year B.Pharm, M.Pharm	UG-85 PG- 10	Students learn about biosimilars.
8.	“Workshop on Personality Development”	25.11.2021	Jeevan sanjivani society, Wai, Satara	Mr.Rajesh Chavan	S.Y, T.Y and Final Year.B.Pharm	UG-127	Stuedents learn about the basic thing of personality development.
9.	“Tips & Tricks to crack GPAT & NIPER 2022”	11.12.2022	Astra zenca AB, Swedan	Mr. Harshad Jadhav	S.Y, T.Y and Final Year.B.Pharm	UG-106	Students understood about tips and tricks to solve GPAT & NIPER 2022.
10	“Conceptual learning in Pharmaceutics”	12.12.2021	Remedium Laboratories, Hydrabad	Dr. Srujan Kumar Reddy	S.Y, T.Y and Final Year.B.Pharm	UG-100	Students learn basic concept of pharmaceutics.



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11	“Importance of Profession ready training and placement program”	04.01.2022	CLINI India	Mr. Vishal Chaudhari	S.Y, T.Y ,Final Year.B.Pharm & M.Pharm	UG-82 PG-08	It gives idea about importance of professional ready training & Placement program.
12	“Career and Clinical Trials Data Analytics”	17.01.2022	Kite-Ai, Pune	Ms. Gayatri Shardul	S.Y, T.Y ,Final Year.B.Pharm & M.Pharm	UG-180 PG-20	Students understand the advanced techniques of Clinical Research.
13	“GPAT & NIPER preparation 2022”	25.01.2022	Academy of NIPER Aspirants	Dr. Machhindra Bocharé	S.Y, T.Y ,Final Year.B.Pharm	UG-230	Students learn about how to prepare for GPAT & NIPER 2022.
14	Aspects of IPR from pharmaceutical Perspective	30.01.2022	Abbot India Pvt. Ltd.	Mr.Swapnil Ghorpade	S.Y,T.Y.& Final Year B.Pharm, M.Pharm	UG & PG-100	Students learn about the various aspects of IPR as per pharmaceutical perspective.
15	Education opportunities abroad after Pharmacy	31.01.2022	Akshay Study Abroad consultant	Mr. Amit Gore	S.Y,T.Y.& Final Year B.Pharm, M.Pharm	UG -256 PG-31	Students understand various exams regarding study at abroad.
16	“Career opportunities in pharmacy”	06.02.2022	Troikaa Pharmaceuticals, Ahmedabad	Mr.Pramod Lahare	S.Y,T.Y.& Final Year B.Pharm, M.Pharm	UG & PG-100	Student should get idea about different career opportunities in pharmacy.



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17	Recent advances in Pharmacovigilance and Medical Coding	08.03.2022	Elite Institute of Pharmacy Skills, Pune	Mrs. Archana Gawade	Third & Final Year B.Pharm	UG-110	Students understood the basic concepts of pharmacovigilance and medical coding.
18	Tricks to solve GPAT paper	25.03.2022	SRTM, Nanded University	Mr. Shivprasad Tengale	Final Year B.Pharm	UG-40	Students learn about how to prepare for GPAT & NIPER 2022.
19	Seminar on “Preparation of Competitive Exam MPSC/UPSC	27.04.2022	The Infinity Academy, Nashik	Mr. Sagar Hange	Third & Final Year B.Pharm	UG -100	Students learn about how to prepare for Competitive Examination.
20	Expert talk on “Placement Campaign”	11.05.2022	Avodha Edutech Pvt.Ltd	Mr. Nikhil Nagvanshi	S.Y, T.Y. & Final Year B.Pharm, M.Pharm	UG & PG-86	Students learn basic things for how to attend interview.
21	“Webinar on Quality by Design in Pharmaceutical Industry.”	23.08.2022	K. B. Inst. of Ph E R, Gandhinagar	Dr. Punit Parejiya,	T.Y & Final year B.Pharm	UG-100	Students learn about the basics of QBD.
22	“Webinar on GPAT and NIPER preparation 2023”	27.08.2022	Academy of NIPER Aspirants (ANA).	Dr. Machhindra Bochare, CEO & Founder,	T.Y & Final year B.Pharm	UG-117	“students should learn about various Strategy for GPAT & NIPER Preparation”



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23	“Webinar on Nanotechnology tools in pharmaceutical R&D”.	28.08.2022	WeInnovate Biosolutions Pvt.Ltd, Pune.	Dr. Sandeep J. Sonawane,	T.Y & Final year B.Pharm/ M.Pharm	UG & PG - 100	Students should understand the need of nanotechnology tools in research.
24	“Workshop on GPAT and NIPER preparation 2023”	03.09.2022	MET institute of Pharmacy, Nashik.	Mr. Pratap Pawar,	T.Y & Final year B.Pharm	UG-108	Students should understand the tips and tricks to solve GPAT & NIPER Paper.
25	“One day workshop on Medical, Scientific and Regulatory Writing”	08.09.2022	CliniTech Support, Pune.	Mrs. Smita Thube	T.Y and Final Year.B.Pharm/M.Pharm	UG & PG- 156	Students should learn about basics of medical, scientific and regulatory writing.
26	Career guidance seminar on recent trends	07.09.2022	Avodha Edutech	Mr.Nikhil Nagawanshi	T.Y and Final Year.B.Pharm	UG-104	Students should aware about the recent job opportunities in market.
27	Webinar on Importance of ready training in clinical research and pharmacovigilance.	10.09.2022	Clini India, Pune	Mrs.Diksha Sharma	T.Y and Final Year.B.Pharm/M.Pharm	UG- 100	Students should learn about basics of clinical research and pharmacovigilance.



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28	“Seminar on career guidance GPAT preparation and soft skill development”	12.09.2022	GPAT discussion centre Pvt. Ltd	Peeyush Jaiswal,	T.Y and Final Year.B.Pharm	UG-81	Students should learn about various how to prepare for GPAT & NIPER 2023.
29	“Webinar on Clinical data management.”	02.10.2022	IQVIA, Banglore.	Mr.Rambabu Bittu,	S.Y, T.Y and Final Year.B.Pharm And M.Pharm	UG/PG-95	Students should aware about basics of clinical data management.
30	“Career webinar on Clinical Data Analytics”	11.11.2022	KITE-Ai Technologies Pvt.Ltd.,Pune	Mr.Peyush Rajput	Final Year.B.Pharm And M.Pharm	UG-60	Students should aware about basics of clinical data analysis.
31	10 days workshop on “skill development and soft skill training”	06.10.2022to 17.10.2022	GTT foundation, Pune.	Ms. Ankita Joshi,	Final Year.B.Pharm	UG-70	Students should learn about basic things of soft skill and skill development.
32	“Importance Of Interviews Techniques And Resume Writing For The Freshers”	16.11.2022	CLINI INDIA	Ms. Nikita Jogewar	Final Year B.Pharm / M.Pharm	UG& PG-120	Students should learn about how to face interview and resume writing.



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33	Webinar on “ Aspects of IPR from Pharmaceutical Perspective”	26.11.2022	Bosum IP	Mr. Swapnil Ghorpade	B.Pharm/ M.Pharm students	UG & PG-100	Students should learn various aspects of IPR from pharmaceutical perspective.
34	Seminar of Financial Wellness management	16.11.2022	Excellence Global Skills	Mr. Sachin Rane	B.Pharm/ M.Pharm	UG-& PG-102	Creating awareness in students regarding financial wellness management.



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## Student Participation in Co-curricular and Extra- curricular Activities.

Sr. No	Name of the Activity	Date	Organized By
	National Level Quiz Competition	24/09/2021	Online PRES' College pf pharmacy,Chincholi,Nashik
2.	State Level Quiz Competition	22/10/2021	Art, Science And Commerce college, Burhanpur,A.Nagar
3.	Innovative Formulation Idea Competition	21/11/2021	Online. MET Institute of Pharmacy, Nashik
4.	State Level Elocution Competition	18/12/2021	Shankarrao Ursal College Of Pharmacy,Khardi,Pune
5.	Annual Cultural Gathering "Panacea 2022"	23/04/2022	College Campus
6.	Cultural Day 2k22	22- 22/04/2022	Seminar Hall Pravara Rural College of Pharmacy Loni
7.	Farewell Party Despedida 2022.	22/05/2022	Seminar Hall Pravara Rural College of Pharmacy Loni



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