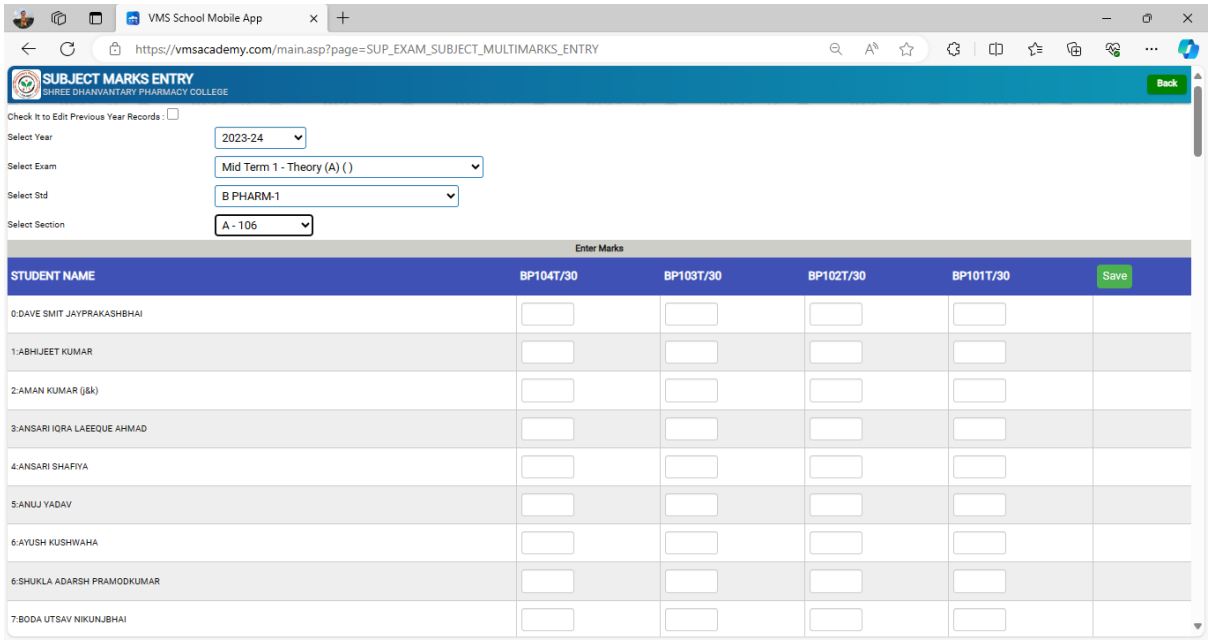
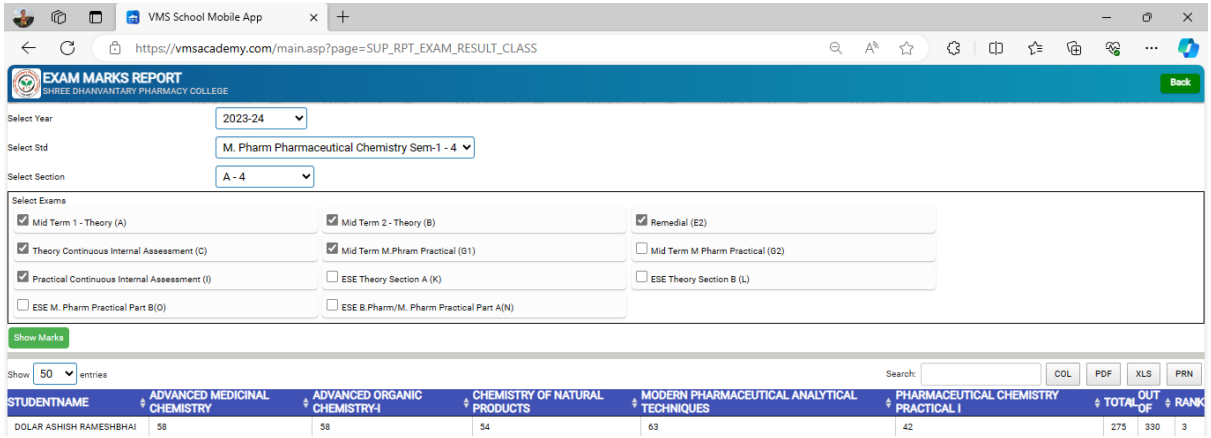
ERP System VMS





SHREE DHANVANTARY PHARMACY COLLEGE

SHREE DHANVANTARY PHARMACY COLLEGE, KIM

MID SEMESTER EXAM WINTER-2022

MARKSHEET

CLASS: 7th Sem. B. Pharm (Section-A) NAME OF SUBJECT: Industrial Pharmacy-II

SUBJECT CODE : BP702TT SUBJECT INCHARGE: Ms. Sonam Gondli

Sr. No	Enrolment No	Students Name	Marks (Out Of 20)				
			1st Mid Sem.	2nd Mid Sem.	Remedial	Best of Two	Mid Sem. Practical
1.	192540290001	Achchha Mariya	20	11	-	20	-
2.	192540290002	Ambaliya Jemilghanshyambhai	18	16	-	18	-
3.	192540290003	Anisha Majumdar	19	15	-	19	-
4.	192540290004	Anjali Kumari Kushwaha	17	11	-	17	-
5.	192540290005	Arvind Pal	14	08	-	14	-
6.	192540290006	Atodaria Satviksinhhitendrasinh	12	10	-	12	-
7.	192540290007	Avaiya Krunal Mukeshbhai	Ab	15	-	15	-
8.	192540290008	Bakrola Vatsal Hitendrasinh	19	16	-	19	-
9.	192540290009	Baria Mitalben Bhupatsinh	12	14	-	14	-
10.	192540290010	Bhatiya Senil Rajeshbhai	11	15	-	15	-
11.	192540290011	Mayank Bahediya	14	13	-	14	-
12.	192540290012	Bhorat Yakub Ismail	15	16	-	16	-
13.	192540290013	Chaudhari Nikita Dalaram	15	14	-	15	-
14.	192540290014	Chauhan Meet Lalsinh	14	13	-	14	-
15.	192540290015	Chauhan Palakkumari Jashvantbhai	15	11	-	15	-
16.	192540290016	Simran Chauhan	18	Ab	-	18	-
17.	192540290018	Deepak Kumar	08	10	-	10	-
18.	192540290019	Deepu Singh	Ab	13	-	13	-
19.	192540290020	Desai Abubakar Faruk	16	10	-	16	-
20.	192540290021	Desai Yusuf Ismail	14	14	-	14	-
21.	192540290022	Dhameliya Ravibhai Dhirubhai	12	17	-	17	-
22.	192540290023	Dobariya Meera Vinubhai	18	19	-	19	-
23.	192540290024	Gandhi Krisha Divyesh	[illegible]	17	-	18	-

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24.	192540290025	Gendi Mustafa Firoz	18	16	-	18	-
25.	192540290026	Ghadiya Bhavin Ganpatsinh	12	14	-	14	-
26.	192540290027	Godhaniyashkumarbharatbhai	13	13	-	13	-
27.	192540290028	Gohil Sonaliben Pravinbhai	16	16	-	16	-
28.	192540290029	Gotharia Shristi Virendra	19	Ab	19	19	-
29.	192540290030	Gupta Anamika Babaloo	19	19	-	19	-
30.	192540290031	Hetvik Darji	13	10	-	13	-
31.	192540290032	Himanshu Kumar Pandey	12	16	-	16	-
32.	192540290033	Jagdev Urvashi Uttambhai	10	08	-	10	-
33.	192540290034	Jat Sampat Ratanlal	10	12	-	12	-
34.	192540290036	Jignesh Saini	15	11	-	15	-
35.	192540290037	Kaleem Ahmad	12	10	-	12	-
36.	192540290038	Kevadiya Utsavramesh Bhai	12	11	-	12	-
37.	192540290039	Khamkar Nirav Ravindrakumar	15	10	-	15	-
38.	192540290040	Khan Mohammed Asjad Sirajahmed	13	10	-	13	-
39.	192540290041	Kothiwala Faridabanu Mohmmedrafik	19	20	-	20	-
40.	192540290042	Lad Nirali Shaileshbhai	12	08	-	12	-
41.	192540290043	Lad Parth Sureshbhai	13	12	-	13	-
42.	192540290044	Ladumor Kaushal Raghavbhai	08	12	-	12	-
43.	192540290045	Lathia Ashutosh Sanjaykumar	11	08	-	11	-
44.	192540290046	Mahida Hemrajsinh Kishorsinh	10	09	-	10	-
45.	192540290047	Makwana Nikhilkumar Chhaganbhai	15	15	-	15	-
46.	192540290048	Mangroliya Ishan Ashokkumar	18	18	-	18	-
47.	192540290049	Mangukiya Parthkumar Mukeshbhai	13	14	-	14	-
48.	192540290051	Modi Amee Nimeshkumar	15	11	-	15	-
49.	192540290052	Mohamed Altamasshaikh	13	12	-	13	-
50.	192540290053	Mori Shubham Rameshkumar	15	05	-	15	-
51.	192540290054	Motala Aamena Kasim	17	Ab	-	17	-
52.	192540290055	Motala Uzair Javed	15	12	-	15	-
53.	192540290056	Movaliya Hilay Pradipbhai	13	06	-	13	-
54.	192540290057	Ms.Komalchandak	14	09	-	14	-
55.	192540290058	Mulla Maleeha Mozuber	19	015	-	19	-
56.	192540290059	Panchal Ayush Rakeshkumar	11	13	-	13	-
57.	192540290060	Pandey Ritikkumar Basukeenath	Ab	11	-	11	-

[illegible] PHARMACY COLLEGE, KIM

MID SEMESTER EXAM WINTER-2022

MARKSHEET

CLASS: 1st Sem. B. Pharm (Section-B) NAME OF SUBJECT:

SUBJECT CODE : SUBJECT INCHARGE:

Sr. No	Enrolment No	Students Name	Marks (Out of 20)				
			1st Mid Sem.	2nd Mid Sem.	Remedial	Best of Two	Mid Sem. Practical
61.	192540290065	Parmar Jay Kumarajitbhai	Ab	16	-	16	-
62.	192540290066	Parmar Siddhikumari	15	09	-	15	-
63.	192540290067	Parth Sharma	16	11	-	16	-
64.	192540290068	Patadiya Reena Ravjibhai	15	03	-	15	-
65.	192540290069	Patel Aanshi Arvindbhai	16	18	-	18	-
66.	192540290070	Patel Akansha Rakeshbhai	14	12	-	14	-
67.	192540290072	Patel Devanshkumar Vijaybhai	15	15	-	15	-
68.	192540290073	Patel Dhara Bhupendrabhai	08	12	-	12	-
69.	192540290074	Patel Dhrumiatulbhai	12	11	-	12	-
70.	192540290075	Patel Dhruvkumar Maheshbhai	07	10	-	10	-
71.	192540290076	Patel Harsiddhi Dineshbhai	15	12	-	15	-
72.	192540290077	Patel Krishna Ashokbhai	15	17	-	17	-
73.	192540290078	Patel Kruti Yashvantbhai	16	16	-	16	-
74.	192540290079	Patel Maitri Rahulkumar	15	18	-	18	-
75.	192540290080	Patel Mitali Kamleshbhai	12	15	-	15	-
76.	192540290081	Patel Neel Jitendrabhai	10	09	-	10	-
77.	192540290082	Patel Riddhi Nikunjkumar	17	19	-	19	-
78.	192540290083	Patel Suhasi Mayurkumar	13	09	-	13	-
79.	192540290084	Patel Tanvi Ashvinkumar	19	19	-	19	-
80.	192540290085	Patel Vatsal Mohanbhai	Ab	13	-	13	-
81.	192540290086	Patel Yashviben Hitesh	14	14	-	14	-
82.	192540290087	Pathak Deepak Sanjaykumar	16	15	-	16	-
83.	192540290088	Pathan Aftab Khanhamidkhan	Ab	13	-	13	-
84.	192540290089	Pathan Masarratkhatun Afzalkha	07	15	-	15	-
85.	192540290090	Pathan Tarannum Rasidbhai	11	17	-	17	-

[illegible] PHARMACY COLLEGE

86.	192540290091	Patil Purva Sharad	14	15	-	15	-
87.	192540290092	Patil Snehal Sunil	14	15	-	15	-
88.	192540290093	Pokal Mitesh Bharatbhai	10	04	-	10	-
89.	192540290094	Prajapati Vinod Dipakbhai	Ab	16	-	16	-
90.	192540290095	Prankada Vaibhavikunvarba Pradyumansinh	16	16	-	16	-
91.	192540290096	Prasad Simran Ramekbal	19	19	-	19	-
92.	192540290097	Raja Habiba Iqbal	15	08	-	15	-
93.	192540290098	Rajbhar Nandanam Ashok	16	12	-	16	-
94.	192540290099	Rajput Janvikumari Dharmendrasinh	15	14	-	15	-
95.	192540290100	Raulji Ruturajsinh Manojkumar	16	17	-	17	-
96.	192540290101	Ravindra Vidhi	16	10	-	16	-
97.	192540290102	Roshan singh Rambabu	Ab	13	-	13	-
98.	192540290103	Sahedadpuri Khushi Sunilkumar	18	11	-	18	-
99.	192540290104	Sahista Choudhari	18	Ab	-	18	-
100.	192540290105	Sha Mahmad Gulam Mehbub	18	16	-	18	-
101.	192540290106	Shah Devanshi Ashish	17	14	-	17	-
102.	192540290107	Shaikh Aquib Iqbal	16	ab	-	16	-
103.	192540290108	Shaikh Bilkishbibi Sattarmiya	15	20	-	20	-
104.	192540290109	Shaikh Safvanabanu Gulamnabi	16	15	-	16	-
105.	192540290110	Sharma Shivam Kuldipbhai	10	08	-	10	-
106.	192540290111	Singh Amrita Bhupendrakumar	11	15	-	15	-
107.	192540290112	Singh Divya Prakash	16	07	-	16	-
108.	192540290113	Singh Shikha Devendra	14	16	-	16	-
109.	192540290114	Singh Vikeshkumara Jaybhai	Ab	16	-	16	-
110.	192540290115	Solanki Jenish Kumarashokbhai	18	16	-	18	-
111.	192540290116	Sufi Zainababdul Razzaksufi	19	ab	-	19	-
112.	192540290117	Surti Keny Mukeshkumar	15	11	-	15	-
113.	192540290118	Kelvin Vadaliya	13	07	-	13	-
114.	192540290119	Vaghela Shivanikumari Narendrabhai	11	12	-	12	-
115.	192540290120	Valaniya Yakit Yunus	Ab	18	-	18	-
116.	192540290121	Vanpariya Himanshu Arjanbhai	12	02	-	12	-
117.	192540290122	Vashi Jeetkumar Rakeshbhai	17	17	-	17	-
118.	192540290123	Vekariya Ashish Chimanbhai	14	11	-	14	-
119.	192540290124	Yadav Sachin Shivkumar	19	18	-	19	-

Roll No.:_____ Enrolment No._____

Shree Dhanvantary Pharmacy College, Kim

I[nd] Mid Semester Examination Winter-2022

B. Pharm. Semester – III

Subject Code: BP302TP **Time: 9:00 am to10:30 am**

Subject Name: Physical Pharmaceutics-I **Date: 29-11-2022**

Total Marks: 20

AM

AB No:- 38, 81, 95, 107

Total :- 04 absent

Instructions:

1. **Attempt any two questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Each Question carry 10 marks.**

Q.1	Answer the following Questions	Marks	BL	CO	PO
a.	Write a note on solubility and factor affecting solubility of drug.	[04]	2,3, 4,5	1	1,3,4
	OR				
a.	Define real and ideal solutions give the derivations of Roult's law and its limitations.	[04]	2,3.4	1	1,3
b.	Discuss ideal solubility parameter briefly	[03]	2	1	1,3
c.	Discuss distribution law with its application.	[03]	2,3	1	1,3
Q.2	**Answer the following Questions**	**Marks**	**BL**	**CO**	**PO**
a.	What is liquification of gas? write about method of achieving liquification of gas.	[04]	2,3	2	1,2,3
	OR				
a.	What is refractive index? how it is measured and drug identifications write itsapplication.	[04]	2,3,4	2	3,1
b.	Define and explain state of matter and how can the various state of matter changewith phase diagram.	[03]	3,2	2	3,1
c.	Explain in detail Aerosols.	[03]	2,3	2	3,1
Q.3	**Answer the following Questions**	**Marks**	**BL**	**CO**	**PO**
a.	Explain optical rotations with method of determination.	[04]	2,3,4	2	1,3
	OR				
a.	Elaborate methods for measuring the surface and interfacial tension.	[04]	2,3	2	1,3,4
b.	Explain liquid crystal.	[03]	2,3	2	1,2
c.	What is polymorphism? Give brief about it.	[03]	2,3,4	2	1,2

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

SHREE DHANVANTARY PHARMACY COLLEGE

Roll No.:_____ Enrolment No._____

Shree Dhanvantary Pharmacy College, Kim
2nd Mid Semester Examination Winter-2022

B. Pharm. Semester – III **Time: 9:00 am to10:30 am**
Subject Code: BP302TP **Date: 10-01-2023**
Subject Name: Physical Pharmaceutics I **Total Marks: 20**

Instructions:
1. **Attempt any two questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Each Question carry 10 marks.**

Q.1	Answer the following Questions	Marks	BL	CO	PO
a.	What are the Methods of adjusting tonicity [2]? Discuss freezing point method in detail.[2]	[04]	1	4	1
	OR				
a.	Definition pH and Explain Sorensen's pH scale.	[04]	3	4	1
b.	write a note on pH determination methods.	[03]	2	4	1
c.	Explain buffer equation and buffer capacity?	[03]	3	4	3
Q.2	**Answer the following Questions**	**Marks**	**BL**	**CO**	**PO**
a.	Explain in brief about drug protein binding.	[04]	2	4	1
	OR				
a.	write a note on protein drug binding kinetics (with equation).	[04]	2	4	1
b.	Give the classification of complexation and write importance of complexation.	[03]	2	4	1
c.	Give the application of complexes in detail.	[03]	2	4	1
Q.3	**Answer the following Questions**	**Marks**	**BL**	**CO**	**PO**
a.	Define surface tension. Write its unit, discuss the HLB scale in detail.	[04]	1	3	1
	OR				
a.	What is spreading co-efficient?[1] Derive its equation.[3].	[04]	2	3	1
b.	Explain crystalline structures of complex.	[03]	2	4	1
c.	Enumerate methods of analysis for complexes. Write on pH titration method.	[03]	3	4	1

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

SHREE DHANVANTARY PHARMACY COLLEGE

Quiz Test 1

PHYSICAL PHARMACY-1 BP302TP

*Required

1. Name *

2. Roll number: *

3. Enrollment No: *

4. Give the full form of CST *

Mark only one oval.

- critical solution temperature
- critical Micelle temperature
- critical solution concentration
- critical solvent concentration

5. Give the full form of CMC *

Mark only one oval.

- critical solution temperature
- critical solvent concentration
- critical Micelle concentration
- critical Micelle temperature

SHREE DHANVANTARY PHARMACY COLLEGE

6. Components of an Aerosol. *

Mark only one oval.

- propellant
- valve
- "both A & B"
- None of above

7. Solid having undefined shape is known as: *

Mark only one oval.

- Amorphous
- Crystalline
- Anisotropic
- Isomorphic

8. The solution which obeys the rout's is known as : *

Mark only one oval.

- Real solution
- Ideal Solution
- saturated solution
- supersaturated solution

9. The solution which Not obeys the rout's is known as *

Mark only one oval.

- Real solution
- supersaturated solution
- saturated solution
- Ideal Solution

SHREE DHANVANTARY PHARMACY COLLEGE

10. The process of transferring a solute between two immiscible phase is known as: *

Mark only one oval.

- Diffusion
- Dissociation
- Dissolution
- Distribution

11. Optical activity angle of rotation.. *

Mark only one oval.

- Dextrorotatory
- levorotatory
- Both A&B
- None of above

12. Solubility depends upon *

Mark only one oval.

- Temperature
- B.P
- M.P
- All of them

13. Aqueous solution includes *

Mark only one oval.

- sugar solution
- Mineral water
- All of them
- Salt solution

SHREE DHANVANTARY PHARMACY COLLEGE

14. Maximum amount of a solute which can dissolve in 100g of a solvent at room temperature is called *

Mark only one oval.

- Eligibility
- Solution
- Solubility
- Capacity

15. Solution which can hold no more of a solute is called *

Mark only one oval.

- Dilute solution
- Aqueous solution
- Saturated solution
- Concentrated solution

16. Apparatus used to determine surface tension of liquid is *

Mark only one oval.

- Capillary tube viscometer
- Du Nouy tensiometer
- Rotometer
- Rheometer

17. HLB Scale was introduced by *

Mark only one oval.

- Griffin
- Brunauer
- Emmett
- Teller

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18. The unit of surface tension is *

Mark only one oval.

- N/m2
- dyne/m
- N/cm
- N/m

19. Stalagmometer is used to determine *

Mark only one oval.

- Viscosity
- Surface Tension
- Solubility
- Particle size

20. Which is more stronger *

Mark only one oval.

- biological
- Physical Adsorption
- Chemical Adsorption
- micanical

21. Solubility Curve is a curve drawn between *

Mark only one oval.

- solubility and temperature
- solubility and pressure
- solubility and mole fraction
- solubility and enthalpy

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22. The solubility of gas_____ with rising temperature *

Mark only one oval.

- Increase
- Decrease
- Remain constant
- nothing Happen

23. Give the full form of SCP. *

Mark only one oval.

- critical solution temperature
- critical solvent concentration
- critical solution concentration
- Sublimation critical Point

YSICAL PHARMACY-1(BP302TP) QUIZ-1

Questions Responses 92 Settings Total points: 20

92 responses

View in Sheets

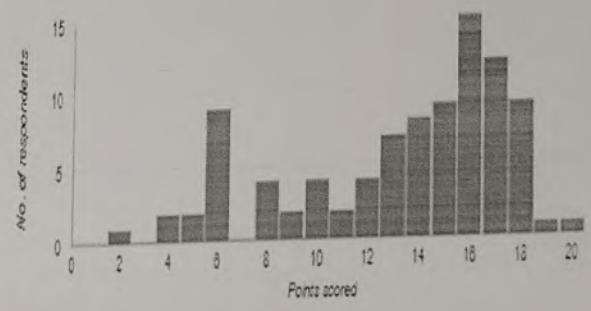
Accepting responses

Summary Question Individual

Insights

Average	Median	Range
13.23/20 points	15/20 points	2-20 points

Total points distribution



Frequently missed questions

Question	Correct responses
The process of transferring a solute between two immiscible phase is known as:	13/92

Quiz Test - 2 (BP302TP)

PHYSICAL PHARMACEUTICS-I (SEM-III)-2022

*Required

1. SUBJECT CODE: BP302TP

_____

2. Name:

3. Email:

_____

4. Roll number:

_____

5. Enrollment No:

_____

6. The HLB range for lipophilic surfactant is: *

Mark only one oval.

- a) 2 to 9
- b) 16 to 20
- c) 9 to 16
- d) above 20

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7. The HLB range for Hydrophilic surfactant is: *

Mark only one oval.

- 2 to 9
- 12 to 20
- 9 to 16
- above 20

8. Solid/ solid interface are important in: *

Mark only one oval.

- a) Emulsion table
- b)Suspension
- c)Table
- d) Pastes

9. The work required to increase the area of a liquid by 1 square meter is known as *

Mark only one oval.

- surface tension
- work of adhesion
- surface free energy
- work of cohesion
- Other: _____

10. Near Critical micellar concentration, micelles of the surfactant molecules assume the shape of: *

Mark only one oval.

- cylindrical
- layered
- spherical
- rod-shaped

11. Cisplatin is an anticancer drug. it is example for *

Mark only one oval.

- organic molecular complex
- inclusion complex
- olefin type
- chelate type

12. Iodine forms a complex when it is dissolved in organic solvent. identify the solvent *

Mark only one oval.

- Toluene
- hexane
- cyclohexane
- carbon tetrachloride

13. Glycine forms complex with cupric ions only at the pH range: *

Mark only one oval.

- about neutral
- alkaline
- both acidic and alkaline
- acidic

14. which is the factor that influences the pH of the buffer solution? *

Mark only one oval.

- ions
- pressure
- temperature
- volume

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15. Henderson- hasselbelch equation relates:

Mark only one oval.

- molecular weight of an acid or base
- PH and molecular weight of acid or base
- pKa and molecular weight of acids or bases
- pKa of acid and pH of the solution

16. amount for acid or basic that must be added to produce a unit change of PH *

Mark only one oval.

- Buffer capacity
- Acid capacity
- Henderson- hasselbelch equation
- Both acid &base capacity

17. The concept of pH was introduced by *

Mark only one oval.

- Arrhenius
- Bronsted
- Sorensen
- Lewis

18. Buffers are mixtures of *

Mark only one oval.

- Strong acid and strong base
- Strong acid and weak base
- Weak acid and their conjugate base
- Weak base and their conjugate acid

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19. pH of neutral salt is *

Mark only one oval.

- 7
- <7
- >7
- 0

20. Have some osmotic pressure as well as same concentration *

Mark only one oval.

- They don't work well in any solution.
- Hypertonic
- Hypotonic
- Isotonic

21. The ratio of the increment (amount added) of strong acid or base to the small change in * pH (Δ pH) brought about by this addition is termed as

Mark only one oval.

- buffer index
- buffer value,
- buffer efficiency
- all of the above

22. isotonic solution refers to two solutions having the same *

Mark only one oval.

- vapour pressure
- atmospheric pressure
- internal pressure
- osmotic pressure

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23. **The HLB concept was introduced in** *

Mark only one oval.

- 1947
- 1950
- 1951
- 1955

24. **The lower the HLB number, the more _____ is the surfactant.** *

Mark only one oval.

- Hydrophilic
- Lipophilic
- Amphiphilic
- All of the above

25. **The higher the HLB number, the more _____ is the surfactant** *

Mark only one oval.

- Hydrophilic
- Lipophilic
- Amphiphilic
- All of the above

Copy of Quiz Test - 2

Something went wrong. Reload.

Questions Responses Settings

Total points: 20

96 responses

View in Sheets

Accepting responses

Summary Question Individual

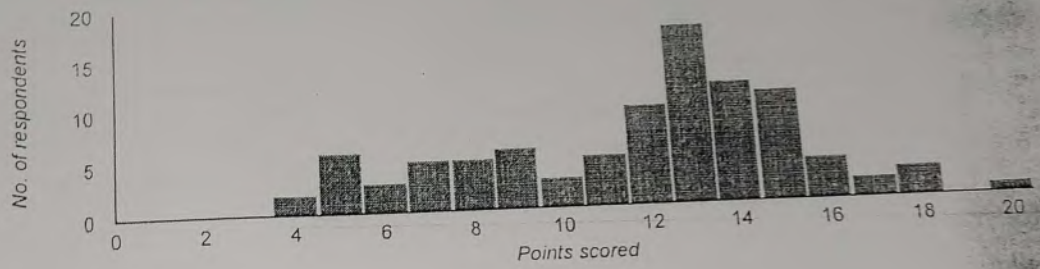
Insights

Average
11.76/20 points

Median
13/20 points

Range
4-20 points

Total points distribution



Frequently missed questions

Correct respons

Question

Solid/ solid interface are important in:

38/9

The work required to increase the area of a liquid by 1 square meter is known as

28/9

Cisplatin is an anticancer drug. it is example for

39/9

Iodine forms a complex when it is dissolved in organic solvent. identify the solvent

Glycine forms complex with cupric ions only at the pH range:

2022

Shree Dhanvantary Pharmacy College, Kim

1st Mid Semester Practical Test Examination Winter-2022

B. Pharm. Semester – IIIrd

Subject Code: BP302TP

Subject Name: Physical Pharmaceutics I **Total Marks: 20**

1. Define solubility. Enumerate factor affecting solubility. [4]
2. What is CMC? Define surface active agent.[4]
3. What is surface tension? Enumerate method of determination of surface tension.[4]
4. What is distribution Co-efficient or partition Coefficient? Give the principle behind determination of distribution co-efficient.[4]
5. Give Principle behind partition coefficient of benzoic acid between benzene and water.[4]

Asst. M.P

DHANVANTARY PHARMACY COLLEGE KIM

2022

Shree Dhanvantary Pharmacy College, Kim

2nd Mid Semester Practical Test Examination Winter-2022

B. Pharm. Semester – IIIrd

Subject Code: BP302TP

Subject Name: Physical Pharmaceutics I **Total Marks: 20**

1. Define buffer capacity and applications of buffer.[4]
2. Give principle to analysis copper glycine Complex by pH titration method.[4]
3. What is HLB value/ HLB scale and application of HLB.[4]
4. Define adsorption. What is adsorption isotherm. Enumerate the type of adsorption.[4]
5. Enlist method for determination of HLB.[4]

Asaf. M. H

SHREE DHANVANTARY COLLEGE

SHREE DHANVANTARY PHARMACY COLLEGE, KIM

Mid Semester Practical Examination Winter-2022

B. Pharm. Semester: III[rd] Sem **Time:**

Subject Code: BP302TP **Date:**

Subject Name: Physical Pharmaceutics I **Total Marks: 20**

Q:1 Major Practical [7]

1. To Determine Stability Constant and Donor Acceptor Ratio of Cupric-Glycine Complex [pH Titration Method]
2. To Determine Buffer Capacity (β) & Dissociation Constant (Pka) of The Acid.
3. To Determine Stability Constant and Donor Acceptor Ratio of PABA-Caffeine Complex. [Solubility Method]
4. To Determine Upper Consolute Temperature of a Phenol Water System.

Q:2 Minor Practical [5]

1. To Determine Solubility of Given Substance at Room Temperature
   1) Nacl 2) Kcl
2. To Determine Surface Tension of the given Liquid Using Ostwald Stalagmometer. (Drop Count Method).
3. To Determine Surface Tension of The Liquid Using Ostwald Stalagmometer. (Drop -Weight Method).
4. To Determine Interfacial Tension Between Two Liquid Using Oswald Stalagmometer.

Q:3 VIVA [8]

SHREE DHANVANTARY PHARMACY COLLEGE

Shah Monika
2125402900 61
Physical Pharmaceutics Assigement 1.

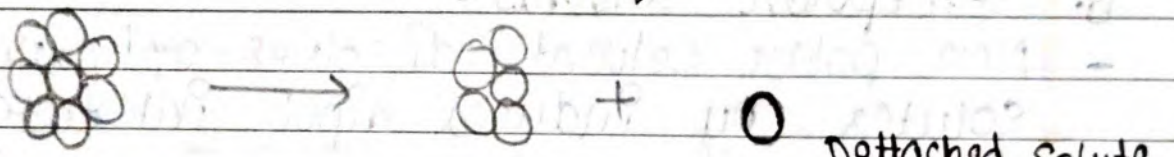
6/10/22

Q.1. Write the mechanism of solute - solvent interaction.

Ans. When favourable interaction takes place between solute and solvent then solute gets dissolved in solvent. This dissolving process depends on free energy change of solute & solvent.

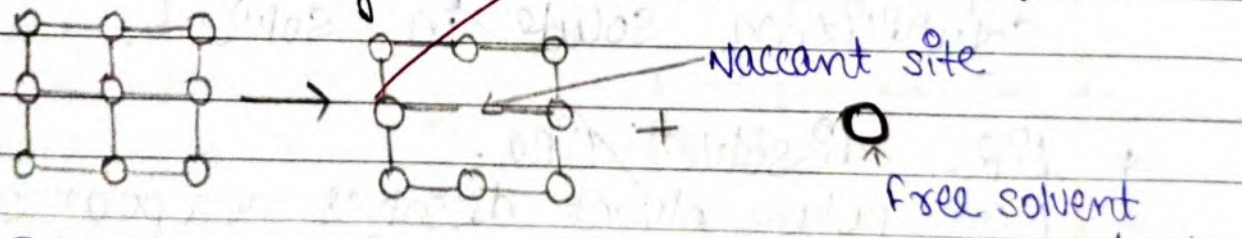
- Mechanism involves 3 steps -

1. Dettachement of solute from bulk form.



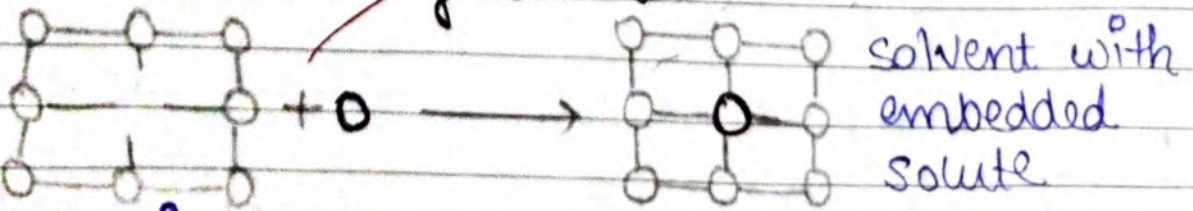
- Enthalpically unfavourable, Entropically favorable

2. Formation of vaccant site in solvent.



- Enthalpically and entropically favourable.

3. Insertion of detached solute molecule in vaccant site of solvent.



- Entropically favourable.

Q.9 Discuss distribution law with its limitation and application.

Ans When a solute is added to two immiscible liquids the solute distribute itself b/w the two liquids in such a way that the ratio of its conc. in two liquid phases is constant at a given temp..

- If a solute x distributed itself b/w two immiscible solvents A & B at constant temp. and x is same molecular condition in both solvents, then

$$\frac{\text{Conc. of x in A}}{\text{Conc. of x in B}} = K_D$$

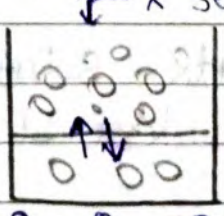
- If C_1 is conc. of solute in solvent A & C_2 is conc. of solute in solvent B.

- It can be expressed as $\frac{C_1}{C_2} = K_D$

where

K_D Or simply K is called → Distribution coefficient or partition coefficient or Distribution ratio

- This is an equilibrium law -



- when the distribution of solute x reached dynamic equilibrium -

→ The rate (R_1) at which molecules of x pass from solvent A to B is $\propto$ to it conc. C_1 in A.

$R_1 \propto C_1$ where,
$R_1 = K_1 C_1$ — (1) K_1 is constant.

- The rate (R_2) at which molecules of X pass from solvent B to A is $\propto$ to its conc. C_2 in

$R_2 \propto C_2$ where,
$R_2 = K_2 C_2$ — (2) K_2 is constant.

- Since at equilibrium

$$R_1 = R_2$$
$$K_1 C_1 = K_2 C_2$$
$$\frac{C_1}{C_2} = \frac{K_2}{K_1} = K_D$$

$$\frac{C_1}{C_2} = K_D$$ Nernst's distribution law eqn.

* Limitations of Distribution law-

- Dilute soln - The conc. of solute must be low in two solvents.
- Constant temperature - Temp. should be kept constant throughout the experimen
- Same molecular state - solute must be in same molecular state in both solven
- Equilibrium concentration - This is achieved by shaking the mixture for long time.
- Non-miscibility of solvents - solvent should

non - miscible so that can be separated.

* Applications of Distribution law-

1. Solvent extraction- Distribution law is used for separation of organic substances from aqueous soln.
- Aqueous soln. shaken with an immiscible organic solvent such as ether or benzene organic substance passes into ethereal layer separated by distillation organic substance is left behind.

2. Partition Chromatography -
→ Desilverization of lead -
→ Confirmatory test for bromide & Iodide
→ Determination of Association.
→ Determination of dissociation.
→ Determination of solubility.

A.M.
06/10/22

A++.