



Shri Wagheshwar Gramvikas Pratishthan's
**LOKNETE SHRI DADAPATIL PHARATE COLLEGE OF
PHARMACY**

A/p-Mandavgan Pharata, Tal-Shirur, Dist-Pune, 412211.



Hon. Mr. R. V. Pharate
Founder President

Hon. Mrs. M. R. Pharate
Founder Secretary

Dr. H. V. Kamble
Principal

1.1.1 The Institution ensures effective curriculum Planning and delivery through a well-Planned and documented process including Academic calendar and conduct of continuous internal Assesment.

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Dr. H. V. Kamble

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SWGP'S LOKNETE SHRI DADAPATIL PHARATE
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Academic calendar

 Hon. Mr. R. V. Pharate Founder President	Shri Wagheshwar Gramvikas Pratishthan's LOKNETE SHRI DADAPATIL PHARATE COLLEGE OF PHARMACY A/p-Mandavgan Pharata, Tal-Shirur, Dist-Pune, 412211. Hon. Mrs. M. R. Pharate Founder Secretary	 Dr. H. V. Kamble Principal
ACADEMIC CALENDAR 2022-23 (Term-I)		
Commencement:		
✓ F. Y. B. Pharmacy: 01/11/2022 to 31/01/2023 No of Academic Days: 92		
✓ S. Y & T. Y B. Pharmacy: 01/08/2022 to 10/12/2022 No of Academic Days: 132		
✓ Final Year B. Pharmacy: 15/07/2022 to 03/12/2022 No of Academic Days: 140		
Co – curricular Activity		
A) Day's to be celebrated		
Sr. No.	Date of Celebration	Name of Event
1.	June 21, 2022	International Yoga Day
2.	July 28, 2022	World Hepatitis Day
3.	September 25, 2022	World Pharmacist Day
4.	September 29, 2022	World Heart Day
5.	November 14, 2022	World Diabetes Day
6.	December 01, 2022	World AIDS Day
7.	February 04, 2023	World Cancer Day
8.	March 08, 2023	International Women's Day
9.	April 07, 2023	World Health Day
10.	October / November 2022	National Pharmacy Week
B) Guest Lectures		
i) Special Guidance Scheme		
Sr. No.	Name of Topic	Schedule
1.	Intellectual Property Rights	September (Third Week)
2.	Neutraceuticals	October (First Week)
3.	Clinical Trials	November (First Week)
4.	Medical Coding	January (Last Week)
5.	Novel Drug Delivery System	February (Last Week)



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ii) Career Guidance

Sr. No.	Name of Topic	Schedule
1.	Opportunities for Higher Education Abroad	July (Last Week)
2.	Career in Formulation and Development	August (Second Week)
3.	Career in Pharmacovigilance / Medical Coding / Medical Transcription	August (Last Week)

iii) Human Values and Professional Ethics: World Pharmacist Day (Sept. 25, 2018)

C) Workshop

Sr. No.	Name of Topic	Schedule
1.	Personality Development Workshop (By Global Talent Track)	July (Third Week)
2.	SPPU Sponsored Personality Development Workshop	January (Second Week)
3.	Molecular Docking	January and February (Second & Fourth Saturday)

D) SPPU Sponsored State Level Seminar on Quality by Design: January (Third Week)

E) Training on Sophisticated Instruments: July 2022, March 2023

F) Model Making and Poster Presentation Competition: Cynosure 2022 – 23

G) Industrial Visit: September 2022

H) Hospital Visit: September 2022

I) Environmental Science Visit: August 2022

4] Extra - curricular Activity

Sr. No.	Name of Activity	Schedule
1.	NSS Camp	January (First Week)
2.	Annual Social Gathering	January 2018-19
3.	Sports	January 2018-19

5] Induction Program: Third week of December 2022



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6] Holiday (Academic Year 2018-19)

Sr. No.	Holiday
1	Ramjan Id
2	Independence day
3	Ganesh Chaturthi
4	Gandhi Jayanti
5	Dussehra
6	Laxmi poojan
7	Balipratipada
8	Bhaubij
9	Republic day
10	Shiv Jayanti
11	Gudi Padwa
12	Dr. Ambedkar Jayaanti
13	Maharashtra din
Diwali Vacations: Tentative Total 08 Days	

N. B.: Holidays as per University of Pune Circular/Government of Maharashtra/JSPM Circular.

Note: The above dates are tentative and subject to change. Students are advised to see the notice board time to time.

Sr. No	Name of Activity	Faculty Coordinator	Date
July 2022			
1	Lokmanya Tilak Birth Aniversary	Prof. M. M. Garje	23 rd July 2022
August 2022			
2	Annabhausathe Birth Aniversary		01 st August 2022
3	Independence Day	All Staff Members	15 th August 2022
4	Ganesh Festival	Prof. M. M. Garje & Prof. P. Sonanwanwe	31 st August 2022
September 2022			
5	Teachers Day	Prof. V. L. Gadadhe	05 th Sept 2022
6	Guest Lecture (T. Y. B. Pharm)	Prof. D. S. Tele &	07 th Sept 2022



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	Industrial Interaction	Prof. A. K. Mahajan	
7	Drawing & Rangoli Competition	Prof. M. M. Garje & Prof. P. Sonanwanwe	10 th Sept 2022
8	Industrial Visit (S. Y. B. Pharm)	Prof. D. S. Tele & Prof. A. K. Mahajan	15 th Sept 2022
9	Speech Competition	Prof. M. M. Garje & Prof. P. Sonanwanwe	17 th Sept 2022
10	Guest Lecture [Final Y. B. Pharm] (Entrepreneurship)	Prof. M. M. Garje & Prof. P. Sonanwanwe	21 st Sept 2022
11	Poster Presentation	Prof. M. M. Garje & Prof. P. Sonanwanwe	24 th Sept 2022
12	Guest Lecture [T. Y. B. Pharm] (Get Way to Financial Freedom)	Prof. M. M. Garje & Prof. P. Sonanwanwe	30 th Sept 2022
October 2022			
13	Birth Anniversary of M. Gandhi	Prof. M. M. Garje & Prof. P. Sonanwanwe	02 nd Oct 2022
14	First Sessional Theory/Practical Examination (S. Y, T. Y & Final Year)	Prof. S. A. Phule & Prof. S. A. Waghmare	07 th Oct 2022 to 18 th Oct 2022
15	Seminar (Final Y. B. Pharm) [Job Opportunities]	Prof. D. S. Tele & Prof. A. K. Mahajan	10 th Oct 2022
16	Industrial Visit (Final Year B. Pharm)	Prof. D. S. Tele & Prof. A. K. Mahajan	19 th Oct 2022
17	Guest Lecture [S. Y. B. Pharm] (Future Opportunities in Pharm Industry)	Prof. M. M. Garje & Prof. P. Sonanwanwe	21 st Oct 2022
November 2022			
18	Induction Program (F. Y. B. Pharm)	Prof. V. L. Gadadhe	01 st Nov 2022
19	Continuous Assessment [(S. Y, T. Y & Final Year)]	Prof. S. A. Phule & Prof. S. A. Waghmare	01 st Nov 2022 to 03 rd Nov 2022
20	Guest Lecture (Final Y. B. Pharm) [Higher Study]	Prof. D. S. Tele & Prof. A. K. Mahajan	02 th Nov 2022
21	Fresher's Party	Prof. V. L. Gadadhe	05 th Nov 2022
22	Certificate Course on Soft Skill and Personality Development (Final Y. B. Pharm)	Prof. D. S. Tele & Prof. A. K. Mahajan	14 th Nov 2022 to 19 th Nov 2022
23	Temple Visit (F. Y. B. Pharm) [Bhuleshwar Temple]	Prof. M. M. Garje & Prof. P. Sonanwanwe	19 th Nov 2022
24	Second Sessional Theory/Practical Examination (S. Y, T. Y & Final Year)	Prof. S. A. Phule & Prof. S. A. Waghmare	21 st Nov 2022 to 30 th Nov 2022
December 2022			
25	World AIDS Day	Prof. M. M. Garje & Prof. P. Sonanwanwe	01 st Dec 2022



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		Sonanwanwe	
26	First Sessional Theory/Practical Examination (F. Y. B. Pharmacy)	Prof. S. A. Phule & Prof. S. A. Waghmare	01 st Dec 2022 to 12 th Dec 2022
27	Continuous Assessment (F. Y. B. Pharmacy)	Prof. S. A. Phule & Prof. S. A. Waghmare	14 th Dec 2022 to 16 th Dec 2022
January 2023			
28	Second Sessional Theory/Practical Examination (F. Y. B. Pharmacy)	Prof. S. A. Phule & Prof. S. A. Waghmare	12 th Jan 2023 to 24 th Jan 2023
February 2023			
29	Cultural Day	Prof. V. L. Gadadhe	06 th Feb 2023 to 08 th Feb 2023
30	Sports	Prof. A. V. Dhobale	09 th Feb 2023 to 11 th Feb 2023
31	Gathering	Prof. V. L. Gadadhe	13 th Feb 2023
32	SPPU Theory/Practical Examination (S. Y, T. Y & Final Year)	Prof. S. A. Phule & Prof. S. A. Waghmare	15 th Dec 2022 to 30 th Jan 2023
33	SPPU Theory/Practical Examination (First Year B. Pharm)	Prof. S. A. Phule & Prof. S. A. Waghmare	15 th Feb 2023 to 10 th March 2023



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OFFICE ORDER
INSTITUTIONAL EXAMINATION COMMITTEE

The Institutional Examination Committee for the academic year 2022-2023 is constituted as follows,

1	Dr. Kamble H.V.	Principal	Chairman
2	Mr. Waghmare S.A.	Assistant Professor	College Examination Officer
3	Ms.Phule S.A.	Assistant Professor	Internal Examination Officer
4	Mr.Dube A.M.	Assistant Professor	Member
5	Ms. Kshirsagar S. B	Assistant Professor	Member

Functions and Responsibilities:

1. Ensure proper dissemination of information with regard to examination among all the stakeholders' viz. students/faculty/non-teaching staff/university authorities etc.
2. Approval and submission of online examination forms on SPPU web portal.
3. To ensure proper, organization of in-semester assessments/sessional/end-semester examinations in the college.
4. Ensure proper communication with SPPU with regard to examination and fulfillment of University circulars.
5. Appoint alternative external senior supervisor/chairman/internal examiners/external examiner for conduct of End-semester theory/practical examination with permission of University authorities.
6. Resolve students/faculty/university grievances with regard to examinations.
7. Uploading Internal/End-semester examination marks on SPPU web portal.
8. Maintain records with regard to conduct of examination and results.



[Signature]
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INTERNAL SQUAD COMMITTEE

Internal Squad Committee has been constructed for smooth conduct of SPPU Theory Examination **Nov/Dec-2022** for the period of **28/11/2022 to 20/12/2022**. Following staffs are appointed as a member for the Internal Squad Committee.

Sr. No	Name of Committee Members	Position
1	Dr.Kamble H.V.	President
2	Mr.Waghmare S.A. CEO	Chairman
3	Mr.Dhobale A.V. Internal Sr. Supervisor	Member
4	Mr.Dube A.M. Asst Sr. Supervisor	Member
5	Mr.Bhubal A.E.	Member
6	Mr.Garje M.M.	Member
7	Mr.Gadadhe V.L.	Teaching Staff Representative
8	Mr.Bulakhe A.S.	Non-Teaching Staff Representative

Responsibilities of Committee Members:-

1. Strict checking of unfair means is sole responsibility of members of committee.
2. Before the start of examination, the committee members should check every student.
3. Care should be taken by committee members, that the students should not carry mobile phones, calculator or any sort of electronic material inside the examination hall,
4. Check whether students are carrying hall tickets by committee members to maintain environment of examination. Any issue related to the unfair means should immediately report to the principal or College Examination Officer.




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Circular for faculty to set the question paper for sessional exam in exam section only.



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Founder Secretary

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CIRCULAR

Subject: Theory Sessional Invigilation Duties & setting of question paper **2022-23**

All the staff members are hereby informed to set the question paper for sessional examination on computer of examination section. Staff members should ensure setting of question paper on or before 31/10/2022.

Mr. Phule S.A.
(12.10.22)

Internal Examination Officer



Dr. Kamble H.V.
Principal

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Sr.No.	Name of Staff	Sign
1	Asst. prof. Shingne S.S.	
2	Asst. prof. Gajge M.M.	
3	Bhalekar M.R.	
4	Bhandari A.S.	
5	Phule S.A.	
6	Kangude S.S.	
7	Khiltare S.S.	
8	Shete Y.T.	
9	Pawar V.H.	
10	Bhujbal A.E.	



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Model of Evaluated Sessional Answer Paper



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Shri Wagheshwar Granvikas Pratishthan Sanchalit

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Ap. Mandavgan Pharate, Tal. Shirur, Dist. Pune (Maharashtra) Pin-412211



Sr.No.

Count entries & Found correct

In Supervisor's Signature & Date

Roll No. (In Figures) 03

Centre

Session Roll No. (In Words)

11/2/23 Friday Three

Day & Date

11/2/23 Friday

Subject

pharmaceutical Engineering

Course/Paper No.

Medium of Answer

English

Main Book No. of Supplies

S.No.	1	2	3	4	5	6	7	8	9	10	Total	Sign Of Examiner
Mark	08	09	09								26/30	

Q. 1)

⇒ 6) Official standards of powder.

- ① Coarse powder
- ② Moderating coarse powder
- ③ Moderating fine powder
- ④ Fine powder
- ⑤ Very fine powder.

⇒ 7) Objectives of size separation

- ① To prepare granule of desire size
- ② To classify material into different size.



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Now the Bernoulli's theorem

$$P_B + Pgh_B + \frac{1}{2} P v_B^2 = \text{constant}$$

Now this equation of Bernoulli's theorem we divided in Pg , then the equation is,

Firstly we equal to both the equation.

Now,

Time energy ^{at} point A = Time energy ^{at} point B.

$$P_A + Pgh_A + \frac{1}{2} P v_A^2 = P_B + Pgh_B + \frac{1}{2} P v_B^2$$

Now, we divided by Pg in this equation so,

$$\frac{P_A}{Pg} + \frac{h_A}{1} + \frac{v_A^2}{2g} = \frac{P_B}{Pg} + \frac{h_B}{1} + \frac{v_B^2}{2g}$$



for angle

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Now the Bernoulli's theorem

$$P_A + \rho gh_A + \frac{1}{2} \rho v_A^2 = \text{Constant}$$

- Time energy per unit volume at point 'B'

① potential energy per unit volume at

$$B = mgh_B = \rho gh_B$$

② pressure energy per unit volume at

$$B = \frac{P_B V}{V} = P_B$$

③ kinetic energy per unit volume at

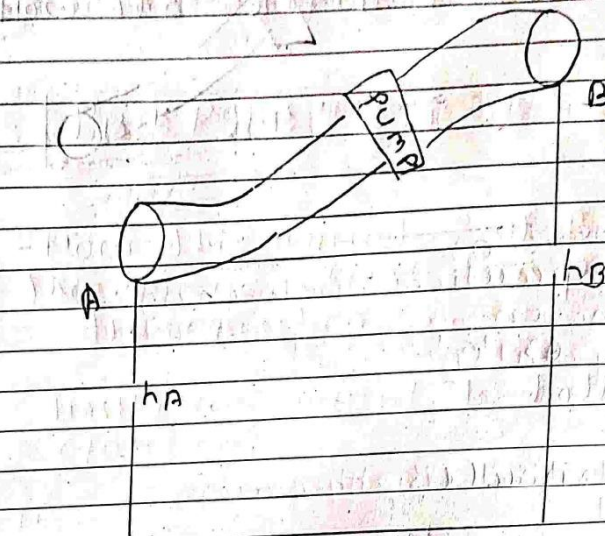
$$B = \frac{1}{2} \frac{mv^2}{V} = \frac{1}{2} \rho v^2_B$$



f. angli

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- Time energy per unit Volume
at point A

① potential energy per unit
Volume at A = $\frac{mgh_A}{V} = \rho gh_A$

② pressure energy per unit Volume
at A = $\frac{P_1 V}{V} = P_1$

③ kinetic energy per unit
Volume at
 $A = \frac{\frac{1}{2}mv^2}{V} = \frac{1}{2} \rho v^2$



for angles

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COLLEGE OF PHARMACY



At - Mandavgan Pharata, Tal. Shirur, Dist. Pune (Maharashtra) Pin-412211

Suppliment

Sr.No.

Verified all entries & Found correct

[Signature]
In-charge of Signature & Stamp

Seat No./Roll No. (In Figures)

03

Examination

Subject

pharmaceutical engineering

Signature

a. a)

=> 1)

Bernoulli's theorem

① Bernoulli's theorem is based on the law of conservation of energy.

② Bernoulli's theorem states that the sum of total energy per unit volume remains constant for a cross-section of the pipe throughout the fluid flow.



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⑧ Disadvantage of ball mill

① It produces too much noise by the atmosphere.

② Balling mill it is very slow process.

③ It consumes high unit electricity.

8/2



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② Advantages of ball mill

- ① Very fine powders are obtained.
- ② Suitable for dry and wet grinding
- ③ loss of production
- ④ loss of installation cost also



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⑥ use of ball mill

① It is used for production of ophthalmic and parenteral products / powders.

② It is used for production of dry and wet grinding.

③ It is used for production of fine powders without dust.



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⑥ use of ball mill

① It is used for production of ophthalmic and parenteral products / particles.

② It is used for production of dry and wet grinding.

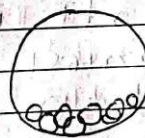
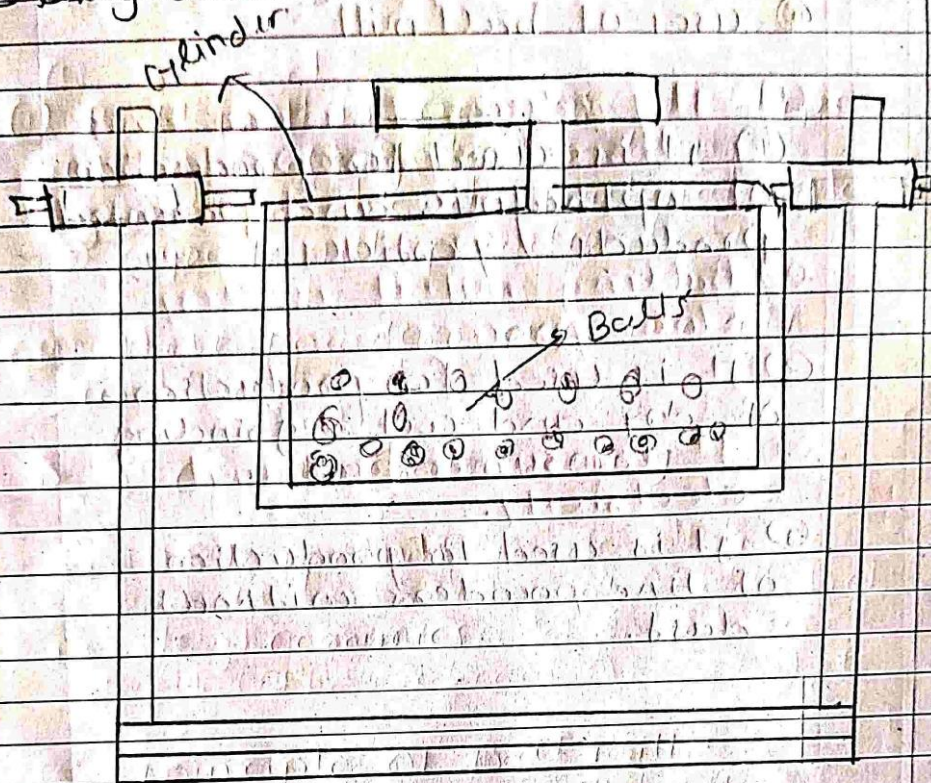
③ It is used for production of fine powders without dust.



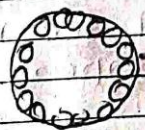
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⑤ Diagram of Ball mill -



→ low speed



→ high speed



→ right speed

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④ Construction and working.

① The ball mill consist of hollow cylinder mounted on the short end rotation around the horizontal axis.

② The cylinder contain balls generally in place inside inside the cylinder along the ball about 30-50% volume of cylinder.

③ The drug to be ground to be inside the cylinder along the ball is to be about 60% volume of cylinder.

④ the mill is allowed to repeat on a correct time.



for angle

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- Ball mill

① Ball mill is one of the type of grinding to used in grind or blend material into superfine powder.

② These powders are mainly used as-

① mineral dressing

② paints

③ ceramics

③ principle of Ball mill -

① The ball mill works on the principle of combine impact and the attrition.

② Randomly moving balls are used for size to reduce the large size particles.



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③ Compression

- In this method, the material is crushed between the rollers with the help of application of pressure.
- which is used in hard materials.
- Examples - rollers mill.

④ Cutting

- In this method particles are cut with the help of sharp blades.
- Examples - Cutter mill.



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Mechanism of Size reduction include following methods.

① Impact

② Attrition

③ Compression

④ Cutting.

1) Impact -

- In this method, material is hit with the molecules which is high speed in change occurs due to the reduces the particle size.

Example - Hammer mill.

2) Attrition -

- In this method, the particle surface move rub with respect to each other and produces shear forces to reduce the particle size.

- Example - fluid energy mill.



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Objectives of size reduction.

- ① The size reduction leads to the increase surface area to enhance the rate of physical and chemical process.
- ② The size of the particles leads to ease of mixing and improve dissolution rate, solubility etc.
- ③ Dosage forms like capsule, insufflations, suppositories require the particle size to less than 60 mm in size.
- ④ Stability of emulsions can be increased by decreasing the oil globules.
- ⑤ Smaller particles lead to higher rate of absorption.
- ⑥ Ophthalmic and dermal preparations should be free from coarse and gritty particles to avoid irritations.



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$$Q2 = Q2 = 8\frac{1}{2} = 8.5$$

Q. 2)

⇒

Size reduction -

① Size reduction it is defined as the process in which the particles which reduces the large substances break into small particles.

② It is also known as comminution or the pulverization.

③ In case of solid particles, size reduction is done by the process of grinding and cutting.

④ In case of liquid particles size reduction is done by the Evaporation and the atomization.

⑤ Then this phenomenon known as size reduction.



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Q1- or for 2+1+1

③ To get uniform dosage form

④ To separate undesirable particles from the mixing.

⑤ To know the size separation equipment.

⑥ To improve mixing of powders.

⑦ To improve solubility and stability of the drugs.



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Sl.No.

...all entries & found correct
In Supervisor's Signature & Date

Roll No. (In Figures) 03
Roll No. (In Words) 11/12/23 Friday Three
Day & Date 11/12/23 Friday
Subject pharmaceutical Engineering
Course/Paper No. Medium of Answer English
Main Book No. of Supplements

Sl.No	1	2	3	4	5	6	7	8	9	10	Total	Sign Of Examiner
Mark	08	09	09								26/30	

Q. 1)

⇒ 6) Official standards of powder.

- ① Coarse powder
- ② Moderating coarse powder
- ③ Moderating fine powder
- ④ Fine powder
- ⑤ Very fine powder.

⇒ 7) Objectives of size separation

- ① To prepare granule of desired size
- ② To classify material into different size.



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a. 3)

⇒ 5) factors affecting on Evaporation.

- ① Humidity
- ② Temperature
- ③ wind speed
- ④ pressure

o/

⇒ 3) Reynold's number.

- it is state that the ratio of the inertial force to the viscous force.

$$Re = \frac{\rho u d}{\eta}$$

- significance -

o/

- ① it is greater than 2000 then it is turbulent flow.



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⇒ 2) manometer-

- manometer it is device which is used to measure the pressure difference between the fluid.

- this is known as manometer-

- there are some different types are -

- ① simple manometer
- ② U-Tube manometer
- ③ well-type manometer
- ④ Differential manometer
- ⑤ Inclined manometer.



for angles

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Now the formula of Kick's law

$$E = K_k \left(\ln \frac{d_1}{d_2} \right)$$

2) Riddinger's law -

This law is state that the energy required for size reduction is directly proportional to the new surface area.

Formula

$$E = K_R (S_n - S_i)$$

3) Bond's law -

K_k ✓ This law is state that the energy required for size reduction is proportional to the new crack length

Formula

$$\frac{E}{\omega} = \sqrt{\frac{100}{d_1}} - \sqrt{\frac{100}{d_2}}$$



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Seat No./Roll No. (In Figures)

03

Examination

Subject

pharmaceutical Engineering

Suppliment No.

Q. 3)

⇒ 2) laws governing size reduction.

There are three laws of size reduction -

① Kick's law

② Rittinger's law

③ Bond's law

1) Kick's law

The kick's law states that the energy required to produce the size of the particles is directly proportional to the ratio of the size reduction.

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② Attrition method-

- this method is the material particle surface move/rubb with respect to each other and produces shear forces to reduce the particle size

- Example - fluid energy mill.

③ Compression method-

- In this method, the material is crushed between the rollers by the application of pressure, which is used in hard materials

example - roller mill

④ Cutting method

- In this method, particles are cut with the help of sharp blades

- example - Cutter mill.



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3>

⇒ 2>

mechanism of size reduction.

The size reduction is also following
Such types of methods are—

① Impact

② Attrition

③ Compression

④ Cutting.

⇒ Impact method

- In this method, material is
hit with hammer and high
speed in change to reduce
the particle size

- Example - Hammer mill.



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- Application of Bernoulli's theorem

① working of ~~can~~ centrifugal pumps.

② it is also working of venturi meter.

③ it is working of the pitot tube as well.

④ it is working of orifice meter etc.

⑤ it is working of aeroplane

⑥ Blowing of roofs is also working on the Bernoulli's theorem.



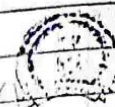
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Examination

Subject: **Pharmaceutical Engineering**

Q. 3)

⇒ 1) Now the final equation of Bernoulli's theorem is

$$\frac{P_A}{\rho g} + \frac{h_A}{2g} + \frac{P_A^2}{2g} + W-F = \frac{P_B}{\rho g} + \frac{h_B}{2g} + \frac{P_B^2}{2g}$$

- Limitation of Bernoulli's theorem

- ① Fluid is non-viscous.
- ② flow is steady
- ③ fluid is incompressible.
- ④ friction losses is negligible.

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**The marks scored by students in
internal
Examinations are entered in the
internal examination marks register.
After entering marks of all the
subjects students are asked to sign
the internal examination marks
register.**

Mother Register



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Internal assessment / Sessional Mean Record

Year 2018 - 2019

T. Y. B. Pharmacy

Semester V

(CA= Continuous Assessment, Im = Improvement)

Subject: Pharmacology - II										Subject: Analytical Pharmacology And Evaluation Technology										Subject: Pharmaceutical Business Management And Quality Management										Subject: Active Pharmaceutical Ingredients Technology										Student Sign.
Theory					Practical					Theory					Practical					Theory					Practical					Theory					Practical					
Sess. Mark	CA I	CA II	Im	Total	Sess. Mark	CA I	CA II	Im	Total	Sess. Mark	CA I	CA II	Im	Total	Sess. Mark	CA I	CA II	Im	Total	Sess. Mark	CA I	CA II	Im	Total	Sess. Mark	CA I	CA II	Im	Total	Sess. Mark	CA I	CA II	Im	Total						
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Name & Sign. of Teacher					Name & Sign. of Teacher					Name & Sign. of Teacher					Name & Sign. of Teacher					Name & Sign. of Teacher					Name & Sign. of Teacher					Name & Sign. of Teacher										
Asst. Prof. Dorendale S.S.					Asst. Prof. Dorendale S.S.					Asst. Prof. Vishal P. Khar.					Asst. Prof. Vishal P. Khar.					Asst. Prof. Anil P. Pitale					Asst. Prof. Anil P. Pitale					Asst. Prof. Dorendale S.S.										

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Principal

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