

Unit 12 - Week 10

Course outline

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- Lecture 49 : Particle size enlargement (Contd.)
- Lecture 50 : Particle size enlargement (Contd.)
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Assignment 10

The due date for submitting this assignment has passed. **Due on 2019-10-09, 23:59 IST.**
 As per our records you have not submitted this assignment.

- Which of the following comminution equipment cannot be used for particles in the range of 3 mm – 50 μm? 1 point
 - a. Ball mills
 - b. Rod mills
 - c. Tube mills
 - d. Table mills

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: d.
- Which of the following material properties dictates particle size reduction process? 1 point
 - a. Toughness
 - b. Abrasiveness
 - c. Low melting point
 - d. All of the above

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: d.
- In granulation process, replacing the air in voidage by liquid is known as _____. 1 point
 - a. Wetting
 - b. Drying
 - c. Filtration
 - d. Nucleation

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: a.
- Which of the following is the correct reason for increase in rate of wetting? 1 point
 - a. Reducing viscosity
 - b. Reducing surface tension
 - c. Increasing contact angle
 - d. All of the above

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: a.
- In granulation, if one drop of liquid generates only one nucleus granule, then its size will be 1 point
 - a. inversely proportional to the drop size
 - b. directly proportional to the drop size
 - c. independent of the drop size

a.
 b.
 c.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: b.
- Which of the following is a controlling factor in wetting during granulation? 1 point
 - a. Viscosity
 - b. Packing density
 - c. Size distribution
 - d. All of the above

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: d.
- Which of the following is the correct expression for Washburn equation? 1 point
 - a. $\frac{dz}{dt} = \frac{4R_p \gamma \cos \theta}{\mu z}$
 - b. $\frac{dz}{dt} = \frac{R_p \gamma \cos \theta}{4\mu z}$
 - c. $\frac{dz}{dt} = \frac{4R_p \gamma \cos \theta}{\rho z}$
 - d. $\frac{dz}{dt} = \frac{R_p \gamma \cos \theta}{4\rho z}$

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: b.
- Increase of humidity _____ the electrostatic force. 1 point
 - a. rapidly increases
 - b. doesn't affect
 - c. rapidly lowers

a.
 b.
 c.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: c.
- Presence of liquid on the particle surface may alter the interparticle forces by _____. 1 point
 - a. reducing the interparticle distance
 - b. increasing the interparticle distance
 - c. reducing particle-particle contact

a.
 b.
 c.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: a.
- Which of the following is the correct expression given by Hamaker for attractive force between a sphere and plane surface? 1 point
 - a. $F_{VW} = \frac{KH^R}{6y}$
 - b. $F_{VW} = \frac{KH^R^2}{6y}$
 - c. $F_{VW} = \frac{KH^R}{6y^2}$
 - d. $F_{VW} = \frac{6KH^R}{y^2}$

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: c.
- For open type milling circuit, the residence time is a controllable variable. 1 point
 - a. True
 - b. False

a.
 b.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: a.
- For closed type milling circuit, the product mean size and size distribution both can be controlled. 1 point
 - a. True
 - b. False

a.
 b.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: a.
- Which of the following is not a state of liquid bonding between group of particles? 1 point
 - a. Pendular
 - b. Funicular
 - c. Droplet
 - d. Biliary

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: d.
- Granule consolidation can occur during _____ state of the binder. 1 point
 - a. Liquid
 - b. Solid
 - c. Both liquid and solid
 - d. None of the above

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: a.
- In granule consolidation, which of the following cannot be determined? 1 point
 - a. Density
 - b. Porosity
 - c. Size
 - d. All of the above

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: c.
- Which of the following is not a controlling parameter for the rate and degree of consolidation? 1 point
 - a. Particle size
 - b. Size distribution
 - c. Binder viscosity
 - d. None of the above

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: d.
- Granule saturation does not depend on 1 point
 - a. liquid level
 - b. granule porosity
 - c. liquid density
 - d. liquid viscosity

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: d.
- With growth of granules, internal forces requiring it interact _____. 1 point
 - a. Decreases
 - b. Increases
 - c. Remains constant

a.
 b.
 c.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: b.
- Improved wetting in granulation, causes 1 point
 - a. wider granule size distribution
 - b. degraded product quality
 - c. narrower granule size distribution
 - d. monosized granules

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: c.
- Fluidized bed granulator does not provide 1 point
 - a. low density granule
 - b. high density granule
 - c. continuous operation
 - d. batch operation

a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0
 Accepted Answers: a.