

Unit 3 - week 1

Course outline

How to access the portal?

Week 0 Assignment 0

week 1

- Lecture 1 : Solid particle characterization
- Lecture 02 : Solid particle characterization (Contd.)
- Lecture 3 : Particle size distribution
- Lecture 4 : Particle size distribution (Contd.)
- Lecture 5 : Particle size distribution (Contd.)
- Lecture Materials
- Quiz : Assignment 1
- Feedback for Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

DOWNLOAD VIDEOS

Details Solution

Live Session

Assignment 1

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-08-14, 23:59 IST.

- 1) Which of the following is not a particle size measurement technique? 1 point
- a) Laser diffraction
b) Chromatography
c) Permeametry
d) Sieving
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: b
- 2) Which of the following is the particle diameter based on the line bisecting the projected area of the particle? 1 point
- a) Feret's diameter
b) Equivalent circle diameter
c) Martin's diameter
d) None of the above
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: c
- 3) Which of the following cannot be the ratio of aperture sizes on consecutive screens for sieving? 1 point
- a) $2^{3/4}$
b) $2^{1/4}$
c) 2
d) $2^{1/2}$
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: a
- 4) The lower limit of particle size to be screened by sieving is determined by: 1 point
- a) free space on the sieve surface
b) attractive forces between particles
c) Both (a) and (b)
d) None of the above
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: c
- 5) Microscopy technique used for measuring the particle size in the range of _____ 1 point
- a) 5 – 100 μm
b) > 45 μm
c) > 2 μm
d) None of the above
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: a
- 6) Elutriation method is the reverse of sedimentation process. 1 point
- a) True
b) False
- a
 b
- No, the answer is incorrect.
Score: 0
Accepted Answers: a
- 7) For the particle size of > 2 μm , which of the following measuring technique is used: 1 point
- a) Microscopy
b) Sedimentation and elutriation
c) Sieving or screening
d) None of the above
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: b
- 8) Measuring the particle size by laser diffraction technique gives a _____ distribution. 1 point
- a) Volume
b) Surface
c) Point
d) None of the above
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: a
- 9) In sedimentation and elutriation, the terminal falling velocity of a particle in fluid _____ with size. 1 point
- a) Decreases
b) Increases
c) Increases first and decreases after a point
d) Does not depend on size of particle
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: b
- 10) The Brownian motion of particles influences the lower limit of particle size range that can be measured using sedimentation and elutriation technique. 1 point
- a) True
b) False
- a
 b
- No, the answer is incorrect.
Score: 0
Accepted Answers: a
- 11) The surface mean diameter of the distribution is 0 points
- a) 0.107 mm
b) 0.219 mm
c) 0.383 mm
d) 0.296 mm
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: b
- 12) The mean volume diameter of the distribution is 0 points
- a) 0.465 mm
b) 0.148 mm
c) 0.202 mm
d) 0.329 mm
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: c
- 13) The mean length diameter of the distribution is 0 points
- a) 0.176 mm
b) 0.358 mm
c) 0.098 mm
d) 0.015 mm
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: a
- 14) Assuming particle density of 2000 kg/m^3 , and $k = 0.7$, the number of particles per gram of the given distribution is 0 points
- a) 21458
b) 86120
c) 45687
d) 10057
- a
 b
 c
 d
- No, the answer is incorrect.
Score: 0
Accepted Answers: b