

Code No: 54059

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

II B.Tech. II Sem., II Mid-Term Examinations, April – 2014

MECHANICAL UNIT OPERATIONS

Objective Exam

Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. The basic equation used to develop an equation for ΔP is ----- []
a) Stoke's Equation b) Ergun Equation c) Burke-Plummer d) Kozney-Carman
2. Use of baffles in agitators helps in minimizing []
a) Swirling tendency b) Vortexing tendency c) both a & b above d) none of the above
3. Conc ratio (α) & fractional super saturation (s) are defined by ----- []
a) $\alpha = 1+s$ b) $\alpha = s-1$ c) $\alpha = 1-s$ d) $\alpha = 1+2s$
4. The purpose of agitation is ---- []
a) Suspending solids b) Dispersing a gas through the liquid in bubbles
c) Blending miscible liquids d) All
5. No of zones present in sedimentation are ---- []
a) 1 b) 2 c) 3 d) 4
6. The setting of particles in stokes law range, terminal velocity is praportional to-- []
a) Particle dia b) Square of paricle dia c) Square root of particle dia d) None
7. Hydrocyclones are used for ----- separations []
a) Liquid-Solid b) Solid-Solid c) Gas-Solid d) None
8. The porosity of a compressible cake is maximum at -- []
a) Upstream face b) Filter medium c) Down stream face d) None
9. For Srokes law range, The Reynolds number is ---- []
a) >1 b) <1 c) $=1$ d) None
10. Which of the following is not a flocculating agent --- []
a) Strong electrolytes b) Lime c) Sodium silicate d) Sodium carbonate

Cont.....2

II Fill in the blanks:

11. The inlet pressure in a constant rate filtration is _____ gradually.
12. The commonly used filter aid is _____
13. Polymetric membranes are used for _____
14. In a rotary drum filter, with increase in drum speed the filtration rate _____
15. Which of the following is a continuous filter _____
16. The ratio of the drag force of impeller to inertial stress is called _____
17. If the settling of a particle is not effected by the surrounding particles then it is _____ settling
18. The ideal membranes for cross flow filtration would have a _____ porosity
19. If the particle size is small then the inertial force is _____ relative to the drag force
20. A settler that removes virtually all the particles from a liquid is known as _____

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Set No. 2

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Objective Exam

Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. The purpose of agitation is ---- []
a) Suspending solids b) Dispersing a gas through the liquid in bubbles
c) Blending miscible liquids d) All
2. No of zones present in sedimentation are ---- []
a) 1 b) 2 c) 3 d) 4
3. The setting of particles in stokes law range, terminal velocity is praportional to-- []
a) Particle dia b) Square of paricle dia c) Square root of particle dia d) None
4. Hydrocyclones are used for ----- separations []
a) Liquid-Solid b) Solid-Solid c) Gas-Solid d) None
5. The porosity of a compressible cake is maximum at -- []
a) Upstream face b) Filter medium c) Down stream face d) None
6. For Srokes law range, The Reynolds number is ---- []
a) >1 b) <1 c) $=1$ d) None
7. Which of the following is not a flocculating agent --- []
a) Strong electrolytes b) Lime c) Sodium silicate d) Sodium carbonate
8. The basic equation used to develop an equation for ΔP is ----- []
a) Stoke's Equation b) Ergun Equation c) Burke-Plummer d) Kozney-Carman
9. Use of baffles in agitators helps in minimizing []
a) Swirling tendency b) Vortexing tendency c) both a & b above d) none of the above
10. Conc ratio (α) & fractional super saturation (s) are defined by ----- []
a) $\alpha = 1+s$ b) $\alpha = s-1$ c) $\alpha = 1-s$ d) $\alpha = 1+2s$

Cont.....2

II Fill in the blanks:

11. In a rotary drum filter, with increase in drum speed the filtration rate _____
12. Which of the following is a continuous filter _____
13. The ratio of the drag force of impeller to inertial stress is called _____
14. If the settling of a particle is not effected by the surrounding particles then it is _____ settling
15. The ideal membranes for cross flow filtration would have a _____ porosity
16. If the particle size is small then the inertial force is _____ relative to the drag force
17. A settler that removes virtually all the particles from a liquid is known as _____
18. The inlet pressure in a constant rate filtration is _____ gradually.
19. The commonly used filter aid is _____
20. Polymetric membranes are used for _____

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Set No. 3

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II B.Tech. II Sem., II Mid-Term Examinations, April – 2014

MECHANICAL UNIT OPERATIONS

Objective Exam

Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. The setting of particles in stokes law range, terminal velocity is proportional to-- []
a) Particle dia b) Square of particle dia c) Square root of particle dia d) None
2. Hydrocyclones are used for ----- separations []
a) Liquid-Solid b) Solid-Solid c) Gas-Solid d) None
3. The porosity of a compressible cake is maximum at -- []
a) Upstream face b) Filter medium c) Down stream face d) None
4. For Stokes law range, The Reynolds number is ---- []
a) >1 b) <1 c) $=1$ d) None
5. Which of the following is not a flocculating agent --- []
a) Strong electrolytes b) Lime c) Sodium silicate d) Sodium carbonate
6. The basic equation used to develop an equation for ΔP is ----- []
a) Stoke's Equation b) Ergun Equation c) Burke-Plummer d) Kozney-Carman
7. Use of baffles in agitators helps in minimizing []
a) Swirling tendency b) Vortexing tendency c) both a & b above d) none of the above
8. Conc ratio (α) & fractional super saturation (s) are defined by ----- []
a) $\alpha = 1+s$ b) $\alpha = s-1$ c) $\alpha = 1-s$ d) $\alpha = 1+2s$
9. The purpose of agitation is ---- []
a) Suspending solids b) Dispersing a gas through the liquid in bubbles
c) Blending miscible liquids d) All
10. No of zones present in sedimentation are ---- []
a) 1 b) 2 c) 3 d) 4

Cont.....2

II Fill in the blanks:

11. The ratio of the drag force of impeller to inertial stress is called _____
12. If the settling of a particle is not effected by the surrounding particles then it is _____ settling
13. The ideal membranes for cross flow filtration would have a _____ porosity
14. If the particle size is small then the inertial force is _____ relative to the drag force
15. A settler that removes virtually all the particles from a liquid is known as _____
16. The inlet pressure in a constant rate filtration is _____ gradually.
17. The commonly used filter aid is _____
18. Polymetric membranes are used for _____
19. In a rotary drum filter, with increase in drum speed the filtration rate _____
20. Which of the following is a continuous filter _____

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Set No. 4

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Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. The porosity of a compressible cake is maximum at -- []
a) Upstream face b) Filter medium c) Down stream face d) None
2. For Stokes law range, The Reynolds number is ---- []
a) >1 b) <1 c) $=1$ d) None
3. Which of the following is not a flocculating agent --- []
a) Strong electrolytes b) Lime c) Sodium silicate d) Sodium carbonate
4. The basic equation used to develop an equation for ΔP is ----- []
a) Stoke's Equation b) Ergun Equation c) Burke-Plummer d) Kozney-Carman
5. Use of baffles in agitators helps in minimizing []
a) Swirling tendency b) Vortexing tendency c) both a & b above d) none of the above
6. Conc ratio (α) & fractional super saturation (s) are defined by ----- []
a) $\alpha = 1+s$ b) $\alpha = s-1$ c) $\alpha = 1-s$ d) $\alpha = 1+2s$
7. The purpose of agitation is ---- []
a) Suspending solids b) Dispersing a gas through the liquid in bubbles
c) Blending miscible liquids d) All
8. No of zones present in sedimentation are ---- []
a) 1 b) 2 c) 3 d) 4
9. The setting of particles in Stokes law range, terminal velocity is proportional to-- []
a) Particle dia b) Square of particle dia c) Square root of particle dia d) None
10. Hydrocyclones are used for ----- separations []
a) Liquid-Solid b) Solid-Solid c) Gas-Solid d) None

Cont.....2

II Fill in the blanks:

11. The ideal membranes for cross flow filtration would have a _____ porosity
12. If the particle size is small then the inertial force is _____ relative to the drag force
13. A settler that removes virtually all the particles from a liquid is known as _____
14. The inlet pressure in a constant rate filtration is _____ gradually.
15. The commonly used filter aid is _____
16. Polymetric membranes are used for _____
17. In a rotary drum filter, with increase in drum speed the filtration rate _____
18. Which of the following is a continuous filter _____
19. The ratio of the drag force of impeller to inertial stress is called _____
20. If the settling of a particle is not effected by the surrounding particles then it is _____ settling