Assignment 5

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

Due on 2020-10-21, 22:59 IST.

1) For a given particle concentration, if the filtration efficiency of a filter medium is high
- The impurities on the upstream side are high
- The impurities on the upstream side are low
- The impurities on the downstream side are high
- The impurities on the downstream side are low
No, the answer is incorrect
Score: 0
Accepted Answers:
The impurities on the upstream side are high
The impurities on the downstream side are low

2) Nonwoven filter fabrics are preferred over woven filter fabrics because
- Nonwovens have higher porosity
- Nonwovens have lower porosity
- Nonwovens reduce the cost of energy for filtration
- Nonwovens are stronger than woven
No, the answer is incorrect
Score: 0
Accepted Answers:
Nonwovens have higher porosity
Nonwovens reduce the cost of energy for filtration

3) Nonwoven filters are preferred because
- Nonwovens have higher porosity
- Nonwovens have lower porosity
- Nonwovens exhibit lower pressure drop
- Nonwovens exhibit higher pressure drop
No, the answer is incorrect
Score: 0
Accepted Answers:
Nonwovens have higher porosity
Nonwovens exhibit lower pressure drop

4) The correct statements among the following for depth filter media
- Cake deposition is highly desirable
- Cake deposition is not desirable
- Particle capture takes place predominantly inside the fabric medium
- Particle capture takes place predominantly on the surface of the fabric medium
No, the answer is incorrect
Score: 0
Accepted Answers:
Cake deposition is highly desirable
Particle capture takes place predominantly inside the fabric medium

5) The correct statements among the following for a filter
- Very fine particles are effectively filtered by principle of surface filtration prior to cake formation
- Very fine particles are effectively filtered by principle of depth filtration
- Cake deposition is highly desirable for surface filtration
- Cake deposition is highly desirable for depth filtration
No, the answer is incorrect
Score: 0
Accepted Answers:
Very fine particles are effectively filtered by principle of depth filtration
Cake deposition is highly desirable for surface filtration

6) The correct statements among the following for a filter
- Particle size smaller than pore diameter can be captured in depth filtration
- Particle size smaller than pore diameter can be captured in surface filtration prior to cake formation
- Woven fabrics are highly suitable for depth filtration
- Nonwoven fabrics are highly suitable for depth filtration
No, the answer is incorrect
Score: 0
Accepted Answers:
Particle size smaller than pore diameter can be captured in depth filtration
Nonwoven fabrics are highly suitable for depth filtration

7) For Brownian Diffusion
- As particle size increases filtration efficiency decreases
- As particle size increases filtration efficiency increases
- Brownian diffusion takes place effectively when air velocity is high
- Brownian diffusion takes place effectively when air velocity is low
No, the answer is incorrect
Score: 0
Accepted Answers:
As particle size increases filtration efficiency decreases
Brownian diffusion takes place effectively when air velocity is low

8) The correct statements among the following for a filter
- For a given pore size should be less than the particle size
- For a given pore size should be more than the particle size
- For coarse impurities to be filtered out higher air velocity is employed
- For very fine impurities to be filtered out higher air velocity is employed
No, the answer is incorrect
Score: 0
Accepted Answers:
For a given pore size should be less than the particle size
For coarse impurities to be filtered out higher air velocity is employed

9) The correct statements among the following for a filter
- When quantity of contaminants is expressed in terms of mass or weight it is defined as air density.
- When quantity of contaminants is expressed in terms of mass or weight it is defined as collection efficiency.
- When quantity of contaminants is expressed in terms of number it is defined as collection efficiency.
- When quantity of contaminants is expressed in terms of number it is defined as air density.
No, the answer is incorrect
Score: 0
Accepted Answers:
When quantity of contaminants is expressed in terms of mass or weight it is defined as air density.
When quantity of contaminants is expressed in terms of number it is defined as collection efficiency.