

X

NPTEL

reviewer4@nptel.iitm.ac.in ▼

Courses » Spray Theory

Announcements

Course

Ask a Question

Progress

FAQ

Unit 13 - Week 12: Spray evaporation and combustion

Register for
Certification exam

Course outline

How to access
the portal

Week 1:
Introduction to
sprays and
atomization

Week 2: Drop
size and velocity
distributions

Week 3:
Atomizers and
their designs

Week 4:
Atomizers and
their designs

Week 5:
Atomization
theory

Week 6:
Atomization
theory

Week 7: Spray
theory

Week 8: Spray
theory

Week 9:
Practical

Assignment 12

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-04-24, 23:59 IST.**

1) In the region near to atomizer exit the evaporation is negligible due to **1 point**

- Transfer number equal to zero
- Interstitial air between the drops saturated with vapor
- Mass fraction near drop surface is equal to mass fraction far away
- All the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All the above

2) D²-Law is valid for **1 point**

- Evaporation due to diffusion
- Evaporation due to advection
- Evaporation due to latent heat
- All the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All the above

3) In steady state droplet evaporation, the diameter of a droplet at an instant say (D) is related to its initial diameter(D₀) as? (Note: λ is the evaporation constant) **1 point**

$$\frac{D_0^2}{D^2} = \lambda \cdot t$$

© 2014 NPTEL - Privacy & Terms - Honor Code - FAQs -

A project of



NPTEL

National Programme on
Technology Enhanced Learning

In association with

NASSCOM®

Funded by

models of sprays

Week 11: Multiphase flow models of sprays

Week 12: Spray evaporation and combustion

 Droplet evaporation Droplet combustion Spray combustion Quiz : Assignment 12 Week - 12 Feedback Form

DOWNLOAD VIDEOS

ce De

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

$$D_0^2 - D^2 = \lambda \cdot t$$

4) Consider an n-heptane drop of diameter 200 μ m suspended in air for a period of 32.8ms **1 point** and the drop diameter reduces to 187 μ m. What is the approximate value of evaporation constant (in mm²/s)?

- 0.15
- 1.5
- 15
- 0.015

No, the answer is incorrect.**Score: 0****Accepted Answers:****0.15**

5) For the above problem, what is the approximate lifetime of the droplet (in ms)? **1 point**

- 96
- 48
- 130
- 260

No, the answer is incorrect.**Score: 0****Accepted Answers:****260**[Previous Page](#)[End](#)