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Courses » Spray Theory

Announcements

Course

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Unit 8 - Week 7: Spray theory

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

Spray measurements techniques

Non-intrusive

Assignment 7

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-03-20, 23:59 IST.**

1) The experimental technique used to measure flow properties at the point in the spray is **1 point**

- PDPA
- PIV
- PLIF
- High speed imaging

No, the answer is incorrect.

Score: 0

Accepted Answers:

PDPA

2) Which experimental technique is non-intrusive **1 point**

- PDPA
- LDV
- High speed imaging
- All the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All the above

3) If the wavelength of the laser source used in PDPA is 532nm, what is the minimum drop size can be measured (in μm)? **1 point**

- 1
- 0.1
- 5

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Quiz :
Assignment 7

Week - 7
Feedback Form

**Week 8: Spray
theory**

**Week 9:
Practical
aspects of
atomizer
fabrication and
manufacturing**

**Week 10:
Multiphase flow
models of
sprays**

**Week 11:
Multiphase flow
models of
sprays**

**Week 12: Spray
evaporation and
combustion**

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0°

30°

45°

60°

No, the answer is incorrect.

Score: 0

Accepted Answers:

0°

5) In the PLIF experiments, wave length of 532 nm laser is used with "Rhodamine-6G" as a dye and the fluorescence wave length will be _____ the incident wave length. **1 point**

equal to

lesser than

greater than

greater or equal to

No, the answer is incorrect.

Score: 0

Accepted Answers:

greater than

6) In the above question, which filter is used to capture the intensity of the fluorescence. **1 point**

Notch filter

High pass filter

Low pass filter

Filter not required

No, the answer is incorrect.

Score: 0

Accepted Answers:

High pass filter

7) A DSLR camera is used to capture a perfume spray. With sufficient backlighting, which among the following combinations of the camera settings is likely to produce a bright sharp (crisp) photograph of the spray? **1 point**

Low shutter speed, high aperture opening and low ISO

Low shutter speed, low aperture opening and high ISO

High shutter speed, low aperture opening and high ISO

High shutter speed, high aperture opening and low ISO

No, the answer is incorrect.

Score: 0

Accepted Answers:

High shutter speed, high aperture opening and low ISO

8) The spray exiting a flat fan nozzle flaps at 50Hz. The flapping sheet is captured by the high speed camera at 200 fps with the shutter speed of 1/1000th of a second at a full frame resolution. The total capture time is 5 second. In the entire experiment, how many frames will be captured by the camera? **1 point**

- 250
- 50
- 1000
- 5000

No, the answer is incorrect.

Score: 0

Accepted Answers:

1000

9) For the above question, how many frames can be obtained for each flapping motion of the spray? **1 point**

- 4
- 40
- 50
- 250

No, the answer is incorrect.

Score: 0

Accepted Answers:

4

10) Which experimental method is used to measure the non-spherical size of the droplet **1 point**

- PDPA
- LDV
- PIV
- High speed imaging

No, the answer is incorrect.

Score: 0

Accepted Answers:

High speed imaging

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