

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Lecture 1 : Introduction to Engineering Calculations

Lecture 2 : Introduction to Engineering Calculations (Contd.)

Lecture 3 : Introduction to Engineering Calculations (Contd.)

Lecture 4 : Introduction to Processes and Process Variables

Lecture 5 : Introduction to Processes and Process Variables (Contd.)

Week 1 Lecture Material

Quiz: Week 1 : Assignment 1

Week 1 Feedback Form

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

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Detailed Assignment Solution

Live Interactive session

Week 1 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2021-08-18, 23:59 IST.

As per our records you have not submitted this assignment.

1) Which one of the following notations are correct for Kelvin, Meter and Kilogram respectively?

2 points

- (a) K, M, Kg
 (b) k, m, Kg
 (c) K, m, kg
 (d) k, M, kg

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 c)

2) Which of the following operation is incorrect?

2 points

- (a) $1 \text{ m/s} \times 5 \text{ kg/m}^3 \times 10 \text{ m}^3/\text{s}$
 (b) $1 \text{ m} \times 5 \text{ m}^2 - 10 \text{ m}^3/\text{s}$
 (c) $1 \text{ m/s} \times 5 \text{ kg/m}^3 \div 10 \text{ kg/m}^2$
 (d) $1 \text{ m/s} \div 5 \text{ kg/m}^3 \div 10 \text{ m}^3/\text{s}$

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 b)

 3) Find the number of significant figures for the following numbers:
 (i) 250 (ii) 250. (iii) 1200.30040 (iv) 0.00789

2 points

- (a) (i) 3, (ii) 3, (iii) 8, (iv) 3
 (b) (i) 2, (ii) 2, (iii) 9, (iv) 5
 (c) (i) 3, (ii) 2, (iii) 8, (iv) 5
 (d) (i) 2, (ii) 3, (iii) 9, (iv) 3

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 d)

 4) Choose the correct answer by rounding off the final value. $9.8 \div 1.23 =$

2 points

- (a) 7.96
 (b) 8.0
 (c) 8
 (d) 7.9

- a.
 b.
 c.
 d.

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 b.

5) Choose the correct answer. Two-point [(x1, y1) and (x2, y2)] linear interpolation formula:

2 points

- (a) $y = y1 + ((x - x1) / (x2 - x1)) \times (y2 - y1)$
 (b) $y = y1 - ((x + x1) / (x2 + x1)) \times (y2 - y1)$
 (c) $y = y1 + ((x + x1) / (x2 + x1)) \times (y2 - y1)$
 (d) $y = y1 + ((x - x1) / (x2 - x1)) \times (y2 + y1)$

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 a)

6) Which of the following method can be used for validating results?

2 points

- (a) Back-substitution
 (b) Order-of-magnitude estimation
 (c) Test of reasonableness
 (d) All of these

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 d)

 7) Choose the correct answer. 98 g of H₂SO₄ contains:

2 points

- (a) 1 mol S
 (b) 4 mol O
 (c) 2 mol H
 (d) All of these

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 d)

 8) Choose the correct answer. What is the percentage of Sulphur in 98 g of H₂SO₄?

2 points

- (a) 16.3
 (b) 32.7
 (c) 65.4
 (d) 2

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 b)

9) Molarity is defined as?

2 points

- (a) gram moles of solute / liter of solution
 (b) gram moles of solvent / liter of solution
 (c) gram moles of solute / liter of solvent
 (d) gram moles of solvent / liter of solute

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 a)

10) Choose the correct statement.

2 points

- (a) Absolute pressure = Gauge pressure – Atmospheric pressure
 (b) Absolute pressure = Gauge pressure + Atmospheric pressure
 (c) Gauge pressure = Atmospheric pressure – Absolute pressure
 (d) None of these

- a)
 b)
 c)
 d)

 No, the answer is incorrect.
 Score: 0

 Accepted Answers:
 b)