

## Unit 4 - Week 2

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### Assignment 2

The due date for submitting this assignment has passed. Due on 2019-08-21, 23:59 IST.  
 As per our records you have not submitted this assignment.

- Each side of a cube is measured to be 7.203 m. What is the total surface area of the cube to appropriate significant figure? 1 point
  - (a) 311.299 m<sup>2</sup>
  - (b) 310.0 m<sup>2</sup>
  - (c) 311.90 m<sup>2</sup>
  - (d) 311.3 m<sup>2</sup>

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: d
- The length, breadth and thickness of a rectangular sheet are 4.234 m, 1.005 m and 2.01 cm respectively. Give the area of the sheet to correct significant figure. 1 point
  - (a) 8.72 m<sup>2</sup>
  - (b) 0.0850 m<sup>2</sup>
  - (c) 8.70 m<sup>2</sup>
  - (d) None of those

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: a
- 5.74 g of a substance occupies 1.2 cm<sup>3</sup>. Express its density to appropriate significant figure. 1 point
  - (a) 4.783 gcm<sup>-3</sup>
  - (b) 4.8 gcm<sup>-3</sup>
  - (c) 4.780 gcm<sup>-3</sup>
  - (d) None of those

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: b
- Two resistances R<sub>1</sub> = 100±3 Ω and R<sub>2</sub> = 200±4 Ω are connected in series. What is their equivalent resistance? 1 point
  - (a) 300 ±4 Ohm
  - (b) 300-7 Ohm
  - (c) 300 ±7 Ohm
  - (d) 300+7 Ohm

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: c
- The percentage error in measurement of mass and speed are 2% and 3% respectively. What is the percentage error in measurement of kinetic energy obtained by measuring mass and speed? 1 point
  - (a) 5%
  - (b) 13%
  - (c) 8%
  - (d) 4%

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: c
- The length and time period of an oscillating pendulum have errors 1% and 2% respectively. What is the percentage error in measurement of 'g'? 1 point
  - (a) 5%
  - (b) 3%
  - (c) 0.25%
  - (d) None of those

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: a
- In hydrogen spectra which series belong to visible range? 1 point
  - (a) Lyman series
  - (b) Balmer series
  - (c) Paschen series
  - (d) Brackett series

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: b
- For which of the following groups the Rydberg formula  $\frac{1}{\lambda} = RZ^2 \left[ \frac{1}{n_1^2} - \frac{1}{n_2^2} \right]$  is applicable? 0 points
  - (a) Only hydrogen atom
  - (b) Hydrogen atom, singly ionized helium atom, doubly ionized lithium atom, triply ionized beryllium atom.
  - (c) Hydrogen atom, helium atom, single ionized lithium atom
  - (d) For all metals and hydrogen atom

Ans.-(b)

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: b
- Sodium spectrum of wavelength 5896 Å is obtained for transition from 1 point
  - (a) 3p<sup>1/2</sup> to 3S<sup>1/2</sup>
  - (b) 3p<sup>3/2</sup> to 3P<sup>1/2</sup>
  - (c) 3p<sup>3/2</sup> to 3S<sup>1/2</sup>
  - (d) None of those

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: a
- Calculate the focal length of a spherical mirror from the following observations. Object distance u = (50.1±0.3) cm and image distance v = (20.1±0.5) cm. 1 point
  - (a) (14.3±0.6) cm
  - (b) (14.36) cm
  - (c) 14.304 cm
  - (d) None of those

a  
 b  
 c  
 d

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers: a
- Consider the spectral line resulting from the transition from n = 2 to n = 1, in atoms and ions given below. The shortest wave length is produced by 1 point
  - (a) hydrogen atom
  - (b) singly ionized helium
  - (c) doubly ionized helium
  - (d) doubly ionized lithium

a  
 b  
 c  
 d

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