

NCERT/CBSE PHYSICS CLASS 11 textbook

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Answers to NCERT/CBSE PHYSICS Class 11(Class XI)textbook Exercise and Additional exercise

CHAPTER TWO

UNITS AND MEASUREMENTS

EXERCISES

(For simplicity in numerical calculations, take $g = 10 \text{ m s}^{-2}$)

2.12 The mass of a box measured by a grocer's balance is 2.300 kg. Two gold pieces of masses 20.15 g and 20.17 g are added to the box. What is (a) the total mass of the box, (b) the difference in the masses of the pieces to correct significant figures ?

Solution:

Mass of box, $m = 2.3 \text{ kg}$

Mass of one of gold pieces, $m_1 = 20.15 \text{ g} \equiv 0.02015 \text{ kg}$

Mass of other gold coin, $m_2 = 20.17 \text{ g} \equiv 0.02017 \text{ kg}$

(a) Total mass of box, $m_{\text{total}} = m + m_1 + m_2 = 2.3 + 0.02015 + 0.02017 = 2.34032 \equiv 2.3 \text{ kg}$

(b) Difference in masses of box, $m_{\text{diff}} = m_2 - m_1 = 0.02017 - 0.02015 = 0.00002 \text{ kg}$

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