

2020/21 Academic Year **Chemistry** Worksheet **Two** for Grade **11****I. Give short answer for the following questions accordingly.**

1. List and explain the major branches of chemistry?
2. What are the steps in scientific method? Explain.
3. Explain the difference between extensive and intensive physical properties with the help of examples.
4. What is the difference between decimal place and significant figures?
5. List the main causes of uncertainty.
6. If a weather forecaster predicts that the temperature for the day will reach 320°F . What is the predicted temperature
 - A) in Celsius scale
 - B) in kelvin scale
7. The wave length of a certain wave is 750mm. How much will it be in kilometer?
8. How many significant figures are there in the following?

a) 9.8673	c) 8.0000	e. 2.67×10^3
b) 0.000301	d. 45.060	f. 2.000×10^{-3}
9. Express the following numbers in scientific notation
 - a) 172,000,000
 - b) 0.000,000,032
10. Calculate the number of electrons, protons and neutrons in
 - a) $^{222}_{86}\text{X}$
 - B. $^{207}_{82}\text{Pb}^{4+}$
 - C. $^{80}_{35}\text{Br}^{-}$

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11. The atomic weight of element x is 61.3. If the element consists of two isotopes that have mass numbers 60 and 62. Calculate their percentage abundance of each isotope.
12. Arrange the following waves in increasing order of their energy
UV, Infrared, gamma rays, microwave, x- rays.
13. For a certain metal the threshold frequency is 1.13×10^{19} Hz. What is the velocity of the ejected electron produced by shining the UV light of 1.5×10^{-11} m?
14. Consider the $n=3$ state of the H- atom. Using Bohr model calculate
- a) The radius of the electron orbit
 - b) The electron velocity
 - c) The energy of the electron

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