

Chapter 4
VOCABULARY REVIEW

In the space at the left, write the term that correctly completes each statement.

alpha particle	electromagnetic energy	law of multiple proportions	quanta
anode	frequency	lepton	quantum theory
antiparticle	gamma ray	mass number	quark
atomic mass	gluon	meson	radioactivity
atomic number	ground state	neutrino	spectroscopy
baryon	hadron	nuclear force	spectrum
beta particle	hertz	nucleon	subatomic particle
cathode	isotope	nuclide	wavelength
cathode ray	law of definite proportions	photon	

- _____ 1. Max Planck proposed that energy is radiated continuously in little packets called _____.
- _____ 2. A(n) _____ is a theoretical particle that is believed to be a constituent of a hadron.
- _____ 3. The _____ refers to the total number of nucleons in an atom.
- _____ 4. A(n) _____ is an essentially massless, neutral lepton.
- _____ 5. The _____ states that specific substances always contain elements in the same ratio by mass.
- _____ 6. Another name for a helium nucleus is a(n) _____.
- _____ 7. A(n) _____ is any of a class of light, elementary subatomic particles.
- _____ 8. Frequency is measured in a unit called a(n) _____, which is equal to one cycle per second.
- _____ 9. A stream of electrons traveling toward the anode is a(n) _____.
- _____ 10. The methods of studying substances that are exposed to some sort of continuous exciting energy are referred to as _____.
- _____ 11. A(n) _____ is a hadron composed of a quark and an antiquark.
- _____ 12. For every particle, a mirror-image particle, called a(n) _____, is believed to exist.
- _____ 13. A(n) _____ is an atom that has the same number of protons as another atom, but a different number of neutrons.
- _____ 14. A theoretical particle exchanged by quarks is called a(n) _____.
- _____ 15. The _____ of a substance is the unique set of wavelengths absorbed or emitted by that substance.
- _____ 16. The phenomenon of the spontaneous production of rays by unstable atomic nuclei is called _____.
- _____ 17. When masses and relative amounts of isotopes have been found, the average _____ can be calculated.
- _____ 18. A very-high-energy X ray given off by a nucleus is called a(n) _____.
- _____ 19. In a cathode-ray tube, the positive terminal is called a(n) _____.

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- | | |
|--|---|
| <u>quanta</u> _____ | 1. Max Planck proposed that energy is radiated continuously in little packets called ____. |
| <u>quark</u> _____ | 2. A(n) ____ is a theoretical particle that is believed to be a constituent of a hadron. |
| <u>mass number</u> _____ | 3. The ____ refers to the total number of nucleons in an atom. |
| <u>neutrino</u> _____ | 4. A(n) ____ is an essentially massless, neutral lepton. |
| <u>law of definite proportions</u> _____ | 5. The ____ states that specific substances always contain elements in the same ratio by mass. |
| <u>alpha particle</u> _____ | 6. Another name for a helium nucleus is a(n) ____. |
| <u>lepton</u> _____ | 7. A(n) ____ is any of a class of light, elementary subatomic particles. |
| <u>hertz</u> _____ | 8. Frequency is measured in a unit called a(n) ____, which is equal to one cycle per second. |
| <u>cathode ray</u> _____ | 9. A stream of electrons traveling toward the anode is a(n) ____. |
| <u>spectroscopy</u> _____ | 10. The methods of studying substances that are exposed to some sort of continuous exciting energy are referred to as ____. |
| <u>meson</u> _____ | 11. A(n) ____ is a hadron composed of a quark and an antiquark. |
| <u>antiparticle</u> _____ | 12. For every particle, a mirror-image particle, called a(n) ____, is believed to exist. |
| <u>isotope</u> _____ | 13. A(n) ____ is an atom that has the same number of protons as another atom, but a different number of neutrons. |
| <u>gluon</u> _____ | 14. A theoretical particle exchanged by quarks is called a(n) ____. |
| <u>spectrum</u> _____ | 15. The ____ of a substance is the unique set of wavelengths absorbed or emitted by that substance. |
| <u>radioactivity</u> _____ | 16. The phenomenon of the spontaneous production of rays by unstable atomic nuclei is called ____. |
| <u>atomic mass</u> _____ | 17. When masses and relative amounts of isotopes have been found, the average ____ can be calculated. |
| <u>gamma ray</u> _____ | 18. A very-high-energy X ray given off by a nucleus is called a(n) ____. |
| <u>anode</u> _____ | 19. In a cathode-ray tube, the positive terminal is called a(n) ____. |

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