

Three-level Guide

Part 1- Literal Level

Check the items below that are true facts from the text

- 1. Diffraction is the bending of light around the edges of barriers.
- 2. White light passing through a double slit produces bands of brightness and darkness.
- 3. A diffraction pattern is the result of light passing through a single narrow slit.
- 4. The first dark lines on either side of the central bright line in an interference and diffraction pattern are called the first order lines.
- 5. The wavelength of light can be determined by using interference patterns.

Part II-Interpretive Level

Check the items below that you believe the book *implied*

- 1. A interference pattern with bright and dark bands can be created only with monochromatic light.
- 2. In theory, an infinite number of interference lines can be created from a double or single slit.
- 3. A diffraction pattern could be created from a single edge rather than a slit.
- 4. A diffraction pattern can be seen by using slits of any width.
- 5. A diffraction grating has no practical usage.

Part III- Applied Level

Check the items you think are true based on your personal experience.

- 1. The wavelengths that make up light emitted from a gas depend on the chemical composition of that gas.
- 2. Information about the structure of particular stars can be gained by looking at the spectrum of wavelengths being emitted by the star.
- 3. Sound waves can turn comers.
- 4. Light coming from the sun contains only one wavelength (color) of light.