6. Temperature variation of different parts of a person's body can be detected by analyzing the emission pattern of which electromagnetic radiation?

a. Infrared
b. Microwave
c. Ultraviolet
d. X-rays

7. Of the various types of electromagnetic radiation listed in the options below, which is the most penetrating through all forms of matter?

a. Visible
b. Ultraviolet
c. Infrared
d. Gamma

8. An object that is giving off only infrared electromagnetic waves is giving off heat through:

a. Conduction
b. Convection
c. Radiation
d. Visible light

9. The electromagnetic radiation that causes tanning:

a. can produce cancer.
b. rarely passes through glass windows.
c. is absorbed by ozone.
d. Only the options a. and c. above are correct.
e. All of the options a., b. and c. above are correct.

10. Plank's quantum theory is compatible with the experimental data related to which of the following?

a. Blackbody radiation
b. the photelectric effect
c. line spectra emitted by hydrogen gas
d. all of the options a., b. and c. above are correct

11. As the temperature of a radiation emitting blackbody becomes higher, what happens to the peak wavelength of the radiation?

a. decreases
b. increases
c. remains constant
d. is directly proportional to temperature

12. According to Wien's displacement law, if the absolute temperature of a radiating blackbody is tripled, then the peak wavelength emitted will change by what factor?

a. 1/3 b. 1 c. 3 d. 9