Assignment - Week 1

1. Environmental analytical science involves development of
   a) Methodology
   b) Instrumentation
   c) Mathematical correlation
   d) All of these
2. Fluorescence may be treated as molecular absorption because it measures
   a) Absorbance of the fluorescence species
   b) Excitation of the fluorescence species
   c) Scattering of the fluorescence species
   d) All of these
3. Electrons cause
   a) Ionization in gases
   b) Expose photographic plate
   c) Yield X-rays when bombarded against suitable targets
   d) All of these
4. During radioactive decay process changes occur in
   a) Nuclear structure
   b) Nuclear Mass
   c) Electronic mass
   d) All of these
5. Frequency is expressed as number of cycles per second or as wave number. Wave number which signifies
   a) Amplitude
   b) Wave height
   c) Number of waves per second
   d) Speed of height
6. EM radiation ranges from
   a) Less than 1A to 1 km
   b) 1 A° – 25 cm
   c) 400 nm – 800 nm
   d) 10 A° to 400 µm
7. Monoatomic substances cannot absorb radiation through
   (a) Electronic
   (b) Vibrational
   (c) Rotational
   (d) Any of these
   (e)
8. The wavelength of soft X rays range from ……..A° **0.1,10**
9. Neutrinos have
   (a) Mass and positive charge
   (b) Mass and negative charge

(c) No mass and no charge

(d) Mass and no charge

(e) None of these

10. Isotopes of nuclei with even number of neutrons are

(a) More compared to nuclei containing odd number of neutrons

(b) Less compared to nuclei containing odd number of neutrons

(c) Equal compared to nuclei containing odd number of neutrons

(d) All of the above