Physics - ICS Part 2 Physics Chapter 19 Short Questions Preparation

Q1. As a solid is heated and begins to glow ,why does it first of its absolute.

Ans 1: Since the red light has longest wavelength ,so it will be emitted first and solid appears red first.

Q2. Will the bright light ejects more from metal surface than dimmer light of tha same colour?

Ans 1: Since intensity number of electrons.
and bright lightis more intensethan dimmer one.So bright light will ejects more electrons than dimmer light.

Q3. What do you understand by work function and stopping potential?

Ans 1: The minimum amount energy required to remove an electron from the surface of a metal is called work function.
And the stopping potential is the potential difference applied to stop the electrons from being ejected from the surface when the light falls on it.

Q4. If you are moving in a spaceship at very high speed relative to the earth.Would you notice difference(a)In your pulse rate(b)In the pulse rate of people on the earth?

Ans 1:

1. The pulse rate of the person inside the spaceship moving with large velociety will decrease.
2. The pulse rate of the people on the earth with respect to the person inside the spaceship with large velocity will increase.

Q5. Define Compton effect.Write formula of Compton shift for scattering angle.

Ans 1: When X-rays are scattered by loosely bound electrons from a graphite target,the phenomena of change in wavelength is known as Compton Effect.Compton shift for scattering angle is given

$$\lambda' - \lambda = \frac{h}{m_e c}(1 - \cos\theta),$$

Q6. What do you know by annihilation of matter?

Ans 1: When a positron comes close to an electron,they annihilate and produce two photons in the gamma rays range.It is called annihilation of matter.

Q7. Which has the lower energy quanta,radio waves or x rays?Explain

Ans 1: Energy of quanta is given as E=hf-hc/lamda

Radio waves length has longer wavelength,Therefore radio waves has lower energy quanta.

Q8. Define ionization potential and excitation potential.

Ans 1: Ionization potential:The potential necessary to remove an electron from the atom is called ionization potential,It is expressed in volts.

Ans 2: Excitation potential:The potential require to raise orbital electron in atom from one energy level to an other is called excitation potential.

Q9. Why can red light be used in a photographic dark room when developing films,but a blue or white light can not?

Ans 1: As we known red light has longest wavelength in visible spectrum,therefore it has less energy than that of blue or white light.So red light is least scattered on account of its large wavelength.Hence photographic films and the materials concerned are less affected in the presence of red light than high energy blue of white light.

Q10. What are the measurement on which two observers in relative motion will always agree upon?

Ans 1: Two observe in relative motion will always agree upon

1. Force
2. Acceleration
