1. **Does de Broglie hypothesis have any relevance to macroscopic matter?**

de-Broglie relation can be applied to both microscopic and macroscopic. Taking, for example, a macro-sized 100 kg car moving at a speed of 100 m/s will have a –Wavelength of $\lambda = \frac{h}{p} = \frac{h}{mv} = \frac{6.63\times10^{-34}}{100\times100} = 6.63 \times 10^{-30}$m.

High-energy γ-radiations have wavelengths of only 10^{-12} m. Very small wavelength corresponds to high frequencies. Waves below certain wavelength or beyond certain frequencies undergo particle-antiparticle annihilation to create mass. So, wave nature or de Broglie wavelength is not observable in the macroscopic matter.

2. **What is de-Broglie Hypothesis? Write the formula for de-Broglie wavelength?**

The dual nature of the matter wave is explained by de Broglie's hypothesis. The de Broglie hypothesis states that the matter can have dual nature. The matter can behave as particles and as waves in quantum mechanics. It implies that the matter can have dual nature as the particle and as the wave.

The wavelength of the matter wave is known as the de-Broglie's wavelength. The expression for de-Broglie's wavelength is given as: $\lambda = \frac{h}{p}$