SIDDHIKSHA
EDUCATION CARE
A place to learn!

SIDDHIKSHA EDUCATION CARE 2024-25

PHYSICS – 12

1. **What is interference of light?**
2. **List the uses of polaroids.**
3. **State Brewstor's law.**
4. **How will you define threshold frequency?**
5. **Define stopping potential.**
6. **Define the Ionization energy and ionization potential.**
7. **The radius of the 5th orbit of hydrogen atom is 13.25 A^0. Calculate the de Broglie wavelength of the electron orbiting in the 5th orbit?**
8. **Calculate the momentum and the de Broglie wavelength of an electron with kinetic energy 2 eV.**
9. **Fresel diffraction – Fraunhofer diffraction – differ.**
10. **What is stopping potential?**
11. **What is matter waves?**
12. **Define Curie.**
13. **Half lives of two radioactive elements A and B are 20 minutes and 40 minutes respectively. Initially, the samples have equal number of nuclei. Calculate the ratio of decayed numbers of A and b nuclei after 80 minutes.**

1. **Discuss the alpha decay process with example**
2. **List out the Laws of photo electric emission.**
3. **A radiation of wavelength 300 nm is incident on a silver surface. Will photo electrons be observed? (Work function of silver is 4.7eV).**
4. **List the uses of polanoids.**
5. **Discuss about Nicol prism.**
6. **Write the properties of cathode rays.**
7. **What is half life of a radio active nucleus? Give the expression.**
8. **State de Broglie hypothesis.**
9. **Give any three applications of X rays**
10. **Differentiate between polarised and unpolarised light.**
11. **Calculate the power of the lens of the spectacles needed to rectify the defect of near sightedness for a person who could see clearly up to a distance of 1.8m.**

1. **What is photo electric cell? Give the construction and working of photo emissive cell.**
2. **Discuss the millikan's oil drop experiment to determine the charge of an electron.**
3. **Explain the J.J Thomson experiment to determine the specific charge of an electron. (Deflection of charge only due to uniform electric field).**
4. **Obtain the equation for bandwidth in Young's double slit experiment.**
5. **Describe briefly Davisson German experiment which demonstrated the wave nature of electrons.**
6. **Obtain Einstein's photo electric equation with necessary explanation.**
7. **Discuss the spectral series of hydrogen atom.**