

Answer the following questions

[1] put true or false as suitable for the phrase with correction? (5 marks)

- 1- The refractive index is a dimensional quantity which is a measure of how much the velocity is reduced inside the medium ()
- 2- in milikan, the oil is drop under effect two forces in case zero electric field ()
- 3- The K.E of emitted electrons from the cathode in a photoelectric effect experiment dependent on the intensity of the incident rays ()
- 4- The magnetic field done a work for an electrons moves in a straight line to move in a circular path with acceleration ()
- 5- the broadness of frigs on the viewing screen is directly proportional to the thickness of the narrow opening ()

[2] What happen if ? (6 marks)

1. you replace the filament in Thompson's experiment by a gamma radioactive source?
2. The frank hertz tube is evacuated?
3. The direction of the current in Helmholtz coils is reversed in Thompson's experiment?

[3] Write short notes on ?

: (3 marks)

1. Piezo electricity.

2. elastic and non-electric collisions

[4] Use schematic drawings only to describe the following:

(3 Marks)

1- the dispersion in Prisms ?

2-the radius of the cylindrical anode and the radius of electron path in Magnetron at $B >, <$ and $= B_C$?

3- Intensity distribution of diffraction patterns incase narrow and wide opening ?

[5] Write the SI units for each of the following quantities: (3 marks)

1. Magnetic relative permeability

2. Electric field

3. Dielectric constant

اشراف

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