Applied Physics [DPH0101]
Branch: Diploma engineering

CIE Repeater Assignment

Short Answer Questions

1. The SI unit of charge is _____.
2. One nm=_____ m
3. The dimensional formula for force is _____.
4. Write 2 fundamental quantities.
5. State the number of significant figures in the following: (a.) 7.53 m2 (b.) 0.09 J
6. What is the charge and mass of an electron?
7. What is the charge and mass of a proton?
8. Give the formula for quantization of electric charge.
9. Give the formula for electrostatic force.
10. Give the SI unit for electrostatic force.
11. Give the SI unit of Electric field.
12. Draw the geometric representation of electric lines of force.
13. Give the definition of Electric flux.
14. Give the SI unit of electric flux.
15. Define Capacitor.
16. Give the formula for capacitance of a capacitor that has charge Q.
17. Draw the combination of capacitors in series.
18. Draw the combination of capacitors in parallel.
19. The capacitance of series combination is given as
20. _____metal is in liquid state at room temperature.
21. The freezing point of mercury is _____° C.
22. Define Heat and give its unit.
23. Draw the diagram of mercury thermometer.
24. Give advantages to the platinum resistance thermometer.

Long Answer Questions

1. State the laws of electrostatics and derive Coulomb's law.
2. Draw the geometric representation of electric lines of force and Give 2 properties of Electric field lines.
3. Derive the equivalent capacitance for capacitors in series.
4. Derive the equivalent capacitance for capacitors in parallel.
5. Explain the platinum resistance thermometer in detail with a diagram.
6. Explain the mercury thermometer in detail with a diagram.
7. Explain Thermal conductivity and law of thermal conductivity in detail.
8. Explain Linear Expansion in detail
9. Describe the various properties of wave with necessary diagrams.
10. State advantages and disadvantages of mercury thermometer.
11. Give the difference between conduction, convection and radiation.
12. Give three properties of light waves.
13. An observer standing at sea coast observes 76 waves reaching the coast per minute. If the wavelength of the waves is 10 m, find the velocity.
14. Explain wave speed, wave frequency, time period, amplitude and wavelength of a wave with necessary diagrams.
15. Explain Total Internal Reflection and give necessary conditions for it.

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