VETREE TUITION CENTRE

299, ALAGARNAGAR BUS STOP, ALAGARKOIL MAIN ROAD, K PUDUR, MADURAI 007

92445 39449, 92450 41486

VETREE TUITION CENTRE

12TH IMPORTANT STUDY MATERIALS

12TH PHYSICS IMPORTANT QUESTIONS

FOR QUARTERLY EXAM - 2023

To get more important materials, visit our YouTube channel
VETREE TUITION CENTRE (https://youtu.be/ovGwGlD__E8)

VETREE TUITION CENTRE

299, ALAGARNAGAR BUS STOP, ALAGARKOIL MAIN ROAD, K PUDUR, MADURAI 007

92445 39449, 92450 41486

12TH PHYSICS QUARTERLY IMPORTANT 2M, 3M & 5M QUESTIONS

2 MARKS

1. Static potential
2. Peltier effect
3. Uses of mass spectrometer
4. Len's law
5. Eg – 5.3
6. Vol 2- p 50 – numerical problem – 2
7. Malu's law
8. Condition of total internal reflection
9. Sky appears blue – why?
10. Ohm's law
11. Peltier effect
12. Galvanometer to Voltmeter
13. Eg 4.22
14. Displacement current
15. Eg 6.21
16. State conservation of electric charges
17. Why is it safer to be inside a car than standing under a tree during lightning?
18. Joule's law of heating
19. Meissner effect
20. Page no: 284, numerical problem: 5
21. Wattles current
22. Equipotential surface
23. Eg 1.20
24. Magnetic flux
25. Eg 3.23
26. Uses of X ray
27. Raylight's scattering
28. Why are dish antennas curved
29. Eg 2.2
30. Applications of Seebeck Effect
31. Fleming's Left Hand Rule
32. Concept of velocity selector

VETREE TUITION CENTRE

299, ALAGARNAGAR BUS STOP, ALAGARKOIL MAIN ROAD, K PUDUR, MADURAI 007

92445 39449, 92450 41486

33. Mention the ways of producing induced EMF
34. Difference between Coulomb's force & Gravitational force
35. Eg 4.26
36. Define: Q factor
37. Electric flux
38. Corona discharge
39. Eg 2.26
40. Hysteresis
41. Ampere's circuital law
42. Eg 4.11
43. Electric dipole
44. Electric field lines
45. Internal resistance of a cell
46. Wave front
47. Coulomb's law
48. Electric resistivity
49. Eg 1.11
50. Step up – step down transformers – distinguish
51. Uses of UV radiation
52. Eg 6.5
53. Short notes on X ray
54. Fraunhofer Lines
55. Lenz law
56. Resistivity or electrical resistivity
57. Quantization of energy
58. Foucaault currents
59. How can the current sensitivity of a galvanometer be increased?
60. Uses of infrared radiation
61. Eg 2.26
62. Huygen's principle
63. Eg 1.24
64. Electric field lines
65. Properties of electric field lines
66. Capacitance & units
67. Eg 2.23

To get more important materials, visit our YouTube channel
VETREE TUITION CENTRE (https://youtu.be/ovGwGlD__E8)

68. What are electromagnetic waves?
69. Law of refraction
70. Eg 6.5
71. Eg 5.3
72. Eg 2.10
73. P 190 – 8q
74. Notes on Ampere Maxwell Law
75. Polar and non-polar molecules
76. Eg 1.21
77. Coulomb's law
78. Eg 2.14
79. EMF
80. Difference between drift velocity & mobility
81. Biot – Savart law
82. Is an ammeter connected in series or parallel in a circuit? Why?
83. Electromagnetic induction
84. Principle of ac generator

3 MARKS

1. Applications of capacitors
2. Eg 2.10
3. Expression for Q factor
4. Ampere's Maxwell law
5. What is optical path? Obtain the equation for optical path
6. Differentiate between Fresnel and Frannhofer diffraction
7. Obtain Gauss law from Coulomb's law
8. Obtain Gauss law from Coulomb's law inverse square law
9. Condition for Bridge balance in wheatstone's bridge
10. 6 Properties of electromagnetic wave
11. Kirchhoff's rule: current & voltage
12. Compare the properties of Para, Dia and Ferromagnetic materials
13. Who will you induce an EMF by changing the area enclosed by the coil?
14. Equation of radius of Snell's window
15. Energy stored in the parallel plate capacitor

16. Relation between current and drift velocity
17. Eg 3.14
18. Expression for energy stored in capacitor
19. Equivalent resistance of a parallel resistor network
20. Example 1.21
21. Galvanometer to Ammeter
22. Various losses in Transformer
23. Relation between F and R for spherical mirror
24. Expression for electrostatic potential due to point charge
25. Cells in parallel
26. P 121 – 4th problem
27. Magnetic Lorentz force
28. P 193 – 6th problem
29. Explain AC circuit containing pure resistor
30. Eg 4.11
31. Expression for the torque experienced by a dipole due to a uniform electric field
32. Compare the properties of soft and hard ferromagnetic materials
33. AC is advantageous than DC. Explain
34. P 284 – 5th problem
35. Obtain the equation for lateral displacement of light passing through a glass slab
36. Eg 1.21
37. Expressions for capacitance of parallel plate capacitors
38. Eg 1.24
39. Salient features of magnetic Lorentz force
40. Expression for the electrostatic potential energy of the dipole in a uniform electric field
41. Gauss law from Coulomb law
42. Eg 2.27
43. P 261 – 2nd problem
44. Apparent depth
45. Galvanometer into voltmeter
46. Eg 2.14
47. Eg 4.19

VETREE TUITION CENTRE

299, ALAGARNAGAR BUS STOP, ALAGARKOIL MAIN ROAD, K PUDUR, MADURAI 007

92445 39449, 92450 41486

48. What is total internal reflection? Conditions for TIR
49. Properties of Ferro magnetic materials
50. The relation between the focal length and radius of curvature of a spherical mirror
51. Expression for average power of AC over a cycle
52. Eg 4.19
53. P 121 – 4th problem
54. Polar and non polar molecules – give examples
55. Eg 7.5
56. An inductor of inductance L carries an electric current i. How much energy is stored while establishing the current in it?
57. Expression for resultant capacitance, when capacitors are connected in series
58. Eg 1.20
59. Determination of the internal resistance of a cell using voltmeter
60. Dispersion & equation for dispersive power of medium
61. Basic properties of electric charge
62. Compare soft & hard ferromagnetic materials

5 MARKS

1. Effect of dielectric placed in parallel plate capacitor
2. Absorption of spectra & types
3. Microscopic model of current and obtain general form of Ohm's law
4. Fizean's method to determine the speed of light
5. Expression for the force between two parallel, current carrying conductors
6. Equation for bandwidth in Young's double slit experiment
7. Construction and working of transformer
8. Lens maker's formula and mention its significance
9. Maxwell's equations in integral form
10. Working of cyclotron
11. Electric filed due it dipole on its equatorial plane
12. Condition for Bridge balance in wheatstone's bridge

To get more important materials, visit our YouTube channel
VETREE TUITION CENTRE (https://youtu.be/ovGwGlD__E8)

13. State gauss law and obtain an expression for electric field due to an infinitely long charged wire
14. Expression for phase angle between the applied voltage and current in a series RLC circuit
15. EMF of two cells are compared using potentiometer
16. How will you induce an EMF by changing the orientation of the coil with respect to magnetic field?
17. State Ampere's circuital law & expression for magnetic field due to the current carrying wire of infinite length using Ampere's law
18. Emission spectra & types
19. Calculate the electric field due to a dipole on its axial line
20. Construction and working of Vande Graff Generator
21. Equivalent resistance of parallel and series network
22. Magnetic induction due to long straight conductor using Ampere is circuital law
23. Phase relationship between voltage and current in a Pure inductive circuit
24. Derive the mirror equation and the equation of lateral / Paterae Magnification
25. Expression for the force on a current carrying conductor in a magnetic field
26. Determine of unknown resistance using meter bridge
27. P 261 – III – 8q
28. P 262 – 10th problem
29. Expression for the force on a current carrying conductor in a magnetic field
30. Calculate the magnetic field inside and outside of the long solenoid using Ampere's circuital law
31. Obtain the expressions for electric filed due to an uniformly charged spherical shell using Gauss law
32. State Ampere's circuital law. How will you induce an EMF by changing the orientation of the coil with respect to magnetic field?
33. Relation for the magnetic field at a point due to an infinitely long straight conductor carrying current
34. What is spectrum? Explain the types of emission spectrum
35. Show mathematically that the rotation of a coil in a magnetic field over one rotation induces an alternating EMF of one cycle?
36. Expression for electrostatic potential due to an electric dipole
37. Derive mirror equation

VETREE TUITION CENTRE

299, ALAGARNAGAR BUS STOP, ALAGARKOIL MAIN ROAD, K PUDUR, MADURAI 007

92445 39449, 92450 41486

38. Expression for self inductance of a long solenoid
39. Determination of internal resistance of a cell using voltmeter
40. Explain the production of induced emf by changing relative orientation of the coil with the magnetic field
41. Relation for the magnetic field at a point due to an infinitely line straight conductor carrying current using Biot – Savart Law
42. Construction of AC generator
43. Electric field due to charged infinite plane sheet
44. Macroscopic form of Ohm's law
45. Show that the mutual inductance between a pair of coils is same (M12 = M21).
46. Explain the working of a single-phase AC generator with necessary diagram.
47. Give the advantage of AC in long distance power transmission with an illustration.
48. Define inductive and capacitive, reactance. Give their units.
49. Obtain an expression for average power of AC over a cycle. Discuss its special cases.
50. Explain the Maxwell's modification of Ampere's circuital law.

To get more important materials, visit our YouTube channel
VETREE TUITION CENTRE (https://youtu.be/ovGwGlD__E8)