

+2 Physics – 250 one mark Questions in the first volume

+ 2 Physics

UNIT: 1 ELECTROSTATICS

1. The branch of science which deals with static electric charges is
2. If an glass rod is rubbed with silk, it becomes
3. Bodies which do not allow the charges to pass through them are called
4. The force between two point charges q_1 and q_2 is given by the equation
5. If charged bodies of charges $7q$, $-3q$, $-4q$ and $5q$ are brought in contact, the total charge =
6. The value of the permittivity of free space is $C^2 N^{-1} m^{-2}$
7. For air, $\epsilon_r =$
8. The force exerted by an electric field E on a charge q is
9. The unit of electric dipole moment is
10. The electric field at any point on the axial line of an electric dipole is given by
11. The electric field at any point on the equatorial line of an electric dipole is
12. The torque experienced by an electric dipole in an electric field is given by
13. The direction of the electric dipole moment is from to
14. The net force on an electric dipole in an electric field is $F =$
15. The relation between the electric field and the electric potential is given by
16. The total number of electric lines of forces passing through the given area is called electric ..
17. The unit of electric potential difference is
18. The unit of electric field intensity is
19. The electric potential due to a point charge $9 \mu C$ at a distance 3 cm is volt.
20. The equation of electric potential at any point due to an electric dipole is
21. The work done in bringing each charge from infinite distance is called electric
22. The unit of electric flux is
23. The total electric flux of the electric field E over any closed surface is equal to $1/\epsilon_0$ times the net charge enclosed by the surface. This is called
24. The electric field due to an infinite long straight charged wire is $E =$
25. The electric field due to an infinite long charged plane sheet is $E =$
26. Electric field at any point in between two parallel sheets of equal and opposite charges is $E =$
27. The electric field at any point on the surface of a uniformly charged spherical shell is ...
28. Electrostatic shielding is based on the fact that the electric field inside a conductor is ...
29. The phenomenon of obtaining charges without any contact with another charge is called
30. A charge of $9 \mu C$ given to the conductor increases the potential by 3 volt . The capacitance is
31. The unit of capacitance is
32. A capacitor is a device to store
33. The number of electric lines of force originating from 1 coulomb charge is
34. Non polar molecule is
35. Polar molecule is
36. The magnitude of the induced dipole moment p is directly proportional to
37. The equation for the capacitance of a parallel plate capacitor with a dielectric is
38. When three capacitors C_1 , C_2 and C_3 are connected in parallel, then $C_p =$
39. Greater the radius of a conductor, is the charge density.
40. Van de Graaff generator produces a potential in the order of volt.
41. Like charges and unlike charges each other.
42. If there are 3 electrons in a body, then the total charge of the body $q =$
43. The permittivity of a medium is
44. The total number of electric lines of forces from a point charge 9 C in free space is $N =$...
45. The equation for the torque on an electric dipole is
46. Electric potential energy is of a system of 3 C and 6 C separated by 18 cm is J
47. The capacitances of a parallel plate capacitor with and without dielectric are $90 \mu F$ and $9 \mu F$. Then ϵ_r is
48. In micro wave oven, are used.
49. An electric dipole contains charges -3 C and $+3 \text{ C}$ separated by 1 nm . The dipole moment is
50. The work done in moving a charge between any two points on an equipotential surface is ...

1. A charge of 180 C passes through a lamp in 3 minutes. The current through it is
2. A material through which the electric charges can flow is called
3. The current is proportional to the velocity.
4. A toaster operating at 240 V has a resistance 60 ohm. The power is equal to watt.
5. When two 4 ohm resistors are in parallel, the effective resistance is equal to ohm.
6. In the case of insulators, as the temperature increases, the resistivity
7. If the resistance of the coil at 0°C is 1 ohm and $\alpha = 0.004/^{\circ}\text{C}$, the resistance at 100°C is
8. The current density has the unit
9. The drift velocity acquired per unit electric field is called
10. mho m^{-1} is the unit of
11. The resistivity of insulators is in the order of Ωm .
12. In superconductors, the conductivity becomes
13. The tolerance of silver, gold, red and brown rings in a carbon resistor are
14. Four resistances $2\Omega, 2\Omega, 4\Omega, 4\Omega$ are connected in series. The effective resistance is equal to ...
15. Kirchoff's first law is a consequence of conservation of
16. Wheatstone's bridge principle is used in
17. Kirchoff's second law is a consequence of conservation of
18. The colours of a carbon resistor are red, green and orange. The value of resistance is $\text{k}\Omega$
19. The balancing lengths are $l_1 = 30\text{ cm}$ and $l_2 = 70\text{ cm}$ when the known resistance of 14Ω is connected in the right gap of a metre bridge. The value of unknown resistance is
20. A lamp is operated at 240 V and the current is 0.25 A. The resistance value is ohm.
21. The balancing lengths are $l_1 = 510\text{ cm}$ and $l_2 = 340\text{ cm}$ in a potentiometer experiment. The E_1 / E_2 is ...
22. The instrument used for measuring electrical power is called
23. The unit of electro chemical equivalent is
24. In voltaic cell, the electrolyte is
25. In Leclanche cell, at the cathode due to oxidation, Zn atom is converted into ions.
26. In lead acid accumulator, during discharge the emf falls to about volt.
27. The cell which is rechargeable is
28. The internal resistance of the secondary cells is
29. The mass of the substance liberated at an electrode is given by the equation
30. In Daniel cell, the emf value is volt.
31. Three resistors each of 2Ω are connected in series with a cell of 12 V. P. d across each resistor is ...
32. A 10Ω resistor is connected in series with a cell of emf 10 V. A voltmeter is connected in parallel to the cell and it reads 9.9 V. The internal resistance of the cell is ohm.
33. The work done in moving a charge of $10\mu\text{ C}$ between two points having a p.difference 100 V is
34. If a current of 10 A flows through a resistor $10\text{ k}\Omega$, the power is watt.
35. The colour code numbers of yellow and grey in a carbon resistor are
36. The temp at which a normal conductor is converted into a super conductor is called
37. The resistivity of copper is $2 \times 10^{-8}\Omega\text{m}$. The conductivity of it is mho m^{-1}
38. A copper wire of 10^{-6} m^2 area of cross-section, carries a current density $1.6 \times 10^6\text{ Am}^{-2}$ and $n = 8 \times 10^{28}$ electrons / m^3 . The drift velocity is equal to ms^{-1} .
39. Two wires of same material and same length have resistances 16Ω and 25Ω . The ratio of the radii.....
40. 1 kWh is equal to J.
41. The external energy necessary to drive the free electrons in a definite direction is called as
42. The rate of flow charges is called as
43. The direction of flow of positive charges in a conductor is called as the
44. An electron of charge e in an electric field E experiences a force
45. The unit of mobility is
46. The quantity of charge passing per unit time through unit area is called as
47. The resistivity of semiconductors is in the order of Ωm .
48. can be used as memory or storage elements in computers.
49. The temperature coefficient of resistance of alloys is
50. Germanium and silicon are called as

+2 Physics

Unit : 3 Effects of electric current

1. The electric iron works on the principle of effect of current.
2. The melting point of tungsten is °C.
3. Fuse wire has high resistance and melting point.
4. The thermo emf is maximum at a temperature called temperature.
5. The unit of Peltier coefficient is
6. Thomson effect is zero for
7. The unit of Thomson coefficient is
8. Thermopile is a device used to detect
9. The equation for the magnetic induction at the centre of the current carrying circular ring is $B = \dots\dots$
10. Tangent galvanometer works on the principle of
11. The reduction factor of T.G. is given by the equation
12. The magnitude of Lorentz force is $F = \dots\dots$
13. The torque on a current carrying coil is maximum when the coil is... to the magnetic field.
14. The deflection per unit voltage is calledsensitivity of a galvanometer.
15. An ideal voltmeter is which has resistance.
16. The product of the current and the loop area is called
17. The value of the gyromagnetic ratio is $C\text{ kg}^{-1}$.
18. The magnetic field in a moving coil galvanometer is the magnetic field.
19. The equation for force on a current carrying conductor in a magnetic field is $F = \dots\dots$
20. Lawrence devised
21. For a given thermocouple, temperature is a constant
22. Peltier effect is the converse of effect.
23. In transformers, dynamos effect is undesirable.
24. At the temperature of inversion, the thermo emf is
25. Thermal energy may be used to produce an emf. This is called effect.
26. Joule's law of heating is given by the equation $H = \dots\dots$
27. The alloy of nickel and chromium is called
28. The relation between the thermo emf and the temperature is $V = \dots\dots$
29. The amount of heat absorbed or evolved at one junction in Peltier effect is $H = \dots\dots$
30. Sn, Au, Ag, Zn, Cd, Sb show effect.
31. Bi, Ni, Pt, Co, Fe, Hg show effect.
32. Seebeck effect is a process.
33. The thermo emf produced in Bi- Ag thermo couple is Bi-Sb thermo couple.
34. Peltier coefficient depends on pair of metals in contact and the of the junction.
35. The unit of the magnetic induction is
36. The magnetic induction due to infinitely long straight conductor carrying current is $B = \dots\dots$
37. Around a current carrying conductor magnetic field is associated. This was observed by...
38. Tangent galvanometer is most sensitive for a deflection of
39. Tangent law is $B = \dots\dots$
40. law can be written as $\int B \cdot dl = \mu_0 I_0$.
41. When a charged particle moves in a circular path in a magnetic field, the time period is $T = \dots\dots$
42. The torque on a rectangular coil of wire in a magnetic field is
43. The deflection per unit current is called sensitivity of a galvanometer.
44. The current sensitivity is given by $(\theta / I) = \dots\dots$
45. To convert a galvanometer in to an ammeter, a resistance is connected in parallel with the galvanometer.
46. To convert a galvanometer in to a voltmeter, a resistance is connected in series with the galvanometer.
47. Bohr magneton value is Am^2 .
48. A current of 0.2 A flows through a circular loop of area 10 cm^2 . The magnetic dipole moment is Am^2
49. In TG, a current of 1A produces a deflection of 30° . The current that produces a deflection of 60° is A
50. The resistance of the tungsten wire of a 100W,220V bulb is ohm.

+2 Physics Unit :4 Electro magnetic induction and Alternating currents

1. Lenz law is in accordance with the law of conservation of
2. The self inductance of a straight conductor is
3. The unit henry can also be written as
4. Transformer works on currents only.
5. The part of the AC generator that passes the current from the coil to the external circuit is
6. The number of magnetic lines of forces crossing unit area in a magnetic field is magnetic
7. Electromagnetic induction was discovered by
8. Fleming's right hand rule is also called as rule.
9. The unit of self inductance is
10. The energy stored in an inductor is given by $E =$
11. The equation for the mutual induction of two long solenoids is $M =$
12. The induced emf by changing the area enclosed by a coil in a magnetic field is $e =$
13. When the plane of a coil is perpendicular to a magnetic field, the induced emf is
14. AC generator is a device used for converting the mechanical energy into
15. If a number armature coils are used in the alternator, it is called as alternator.
16. Electro magnetic brakes use current
17. Transformer works on the principle.
18. The ratio of the output power to the input power of a transformer is called
19. Eddy current losses are minimized by using a core made of an alloy of steel.
20. The frequency of AC used for domestic power in India is
21. The average value of the AC over one complete cycle is
22. The relation between I_{rms} and I_0 is
23. In an AC circuit containing R only, the phase difference between current and voltage is
24. The inductive reactance X_L is given by $X_L =$
25. A capacitor offers infinite resistance to current.
26. In RLC circuit, the instantaneous current is given by $I =$
27. The equation for Q factor is given by $Q =$
28. The average power consumed over a complete cycle is $P_{av} =$
29. Choke coil is used to control the current in an circuit.
30. Choke coils are used in tubes which work on alternating currents.
31. The reactance of an inductor is proportional to the frequency.
32. Shell type cores are used to minimize losses.
33. The number of magnetic lines of forces crossing a closed area is called magnetic
34. The selectivity or sharpness of a resonant circuit is measured by the factor.
35. The ratio of the voltage across a coil or capacitor to the applied voltage is called as
36. For normal frequencies, the Q factor lies between
37. For radio frequencies, air chokes are used. These chokes are called as chokes.
38. Whenever there is a change in the magnetic flux linked with a closed circuit, an emf is induced in it. This phenomenon is called
39. In Fleming's right hand rule, the middle finger points the direction of the
40. The property of the coil which enables to produce an opposing induced emf in it when the current in the coil changes is called
41. If two coils are wound on a soft iron core, the mutual induction is
42. The induced emf is given by the equation $e =$
43. In fans, motors are used.
44. In step up transformers, the transformer ratio k is than one.
45. A power of 11kW is transmitted at 5.5kV through a transmission line of resistance 1 ohm. The power loss =
46. In an AC circuit with C only, the phase difference between the current and the voltage is
47. In an LCR circuit, at resonance, the impedance is and the current is maximum.
48. The rms value of the AC is times the peak value of the alternating current.
49. The direction of the eddy current can be noted by
50. In a three phase AC generator, the emf's of the coils differ by

+2 Physics Unit – 5 Electromagnetic waves and wave optics

1. Electromagnetic waves are discovered by -----
2. An accelerated charge is a source of -----
3. Electromagnetic waves are ----- in nature.
4. The relation between the velocity of light C , μ_0 and ϵ_0 is given by the relation $C =$ -----
5. Hertz produced electromagnetic waves of frequency -----
6. Electromagnetic waves cover a wide range of -----
7. Atoms and molecules in an electric discharge tube give ----- rays.
8. The wavelength range of microwaves is -----
9. The frequency range of X rays is -----
10. The frequency range of FM band is from -----
11. In Physiotherapy, ----- lamps are used.
12. The wavelengths of the sodium emission lines are ----- .
13. The ----- spectrum is used to identify the gas.
14. Incandescent solids, carbon arc lamp etc. give ----- spectrum.
15. Using ----- spectra, the molecular structure of the substance can be studied.
16. The example of line absorption spectrum is ----- spectrum.
17. The sun's outer layer is called -----
18. The type of delayed fluorescence is called -----
19. According to corpuscular theory, light energy is the kinetic energy of the -----
20. Huygens assumed that light waves are ----- in nature.
21. The energy of each photon is given by the equation -----
22. The scattering of sunlight by the molecules of the earth's atmosphere is called -----
23. The scattering of light by the colloidal particles is called ----- effect.
24. In industry, ----- spectroscopy is applied to study the properties of the materials.
25. The locus of the particles having the same state of vibration is called as -----
26. A linear source of light will give rise to ----- wavefront.
27. ----- principle helps us to locate the position and the shape of the wavefront.
28. In reflection of light, the angle of incidence = the angle of -----
29. For total internal ----- to take place, light must travel from denser medium to rarer medium.
30. The equation of bandwidth of interference fringes is $\beta =$ -----
31. An important application of interference in thin films is the formation of ----- rings.
32. The radius of the n^{th} dark ring equation is -----.
33. The amount of bending in diffraction depends on the -----
34. In Fresnel diffraction, the incident wavefront is either -----.
35. Using spectrometer, ----- diffraction can be observed.
36. The combined width of a slit and a ruling is called -----
37. In a plane diffraction grating, $\lambda =$ -----
38. The phenomenon of ----- proves that light waves are transverse.
39. The plane perpendicular to the plane of vibration is called plane of -----
40. A device that produces a plane ----- light is called polariser.
41. The angle of incidence at which the reflected beam is completely plane polarised is angle of -----
42. The equation for Brewster's law is $\mu =$ -----
43. The polarising angle for glass is -----
44. The pile of plates uses the polarisation by ----- phenomenon.
45. The double refraction phenomenon was discovered by -----
46. Crystals like mica, topaz etc. having two optic axes are called -----
47. The refractive index for Canada balsam cement is ----- for both the rays.
48. H polaroids use a thin film of -----
49. Polaroids are used as ----- glasses
50. In an EM wave, the angle between the electric and the magnetic field vectors are at -----.

With thanks - from

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+ 2 Physics

UNIT: 1 ELECTROSTATICS

Answer s

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. The branch of science which deals with static electric charges is 2. If an glass rod is rubbed with silk, it becomes 3. Bodies which do not allow the charges to pass through them are called 4. The force between two point charges q_1 and q_2 is given by the equation 5. If charged bodies of charges $7q$, $-3q$, $-4q$ and $5q$ are brought in contact, the total charge = 6. The value of the permittivity of free space is $C^2 N^{-1} m^{-2}$ 7. For air, $\epsilon_r =$ 8. The force exerted by an electric field E on a charge q is 9. The unit of electric dipole moment is 10. The electric field at any point on the axial line of an electric dipole is given by 11. The electric field at any point on the equatorial line of an electric dipole is 12. The torque experienced by an electric dipole in an electric field is given by 13. The direction of the electric dipole moment is from to 14. The net force on an electric dipole in an electric field is $F =$ 15. The relation between the electric field and the electric potential is given by 16. The total number of electric lines of forces passing through the given area is called electric 17. The unit of electric potential difference is 18. The unit of electric field intensity is 19. The electric potential due to a point charge $9 \mu C$ at a distance 3 cm is volt. 20. The equation of electric potential at any point due to an electric dipole is 21. The work done in bringing each charge from infinite distance is called electric 22. The unit of electric flux is 23. The total electric flux of the electric field E over any closed surface is equal to $1 / \epsilon_0$ times the net charge enclosed by the surface. This is called 24. The electric field due to an infinite long straight charged wire is $E =$ 25. The electric field due to an infinite long charged plane sheet is $E =$ 26. Electric field at any point in between two parallel sheets of equal and opposite charges is $E =$ 27. The electric field at any point on the surface of a uniformly charged spherical shell is ... 28. Electrostatic shielding is based on the fact that the electric field inside a conductor is ... 29. The phenomenon of obtaining charges without any contact with another charge is called 30. A charge of $9 \mu C$ given to the conductor increases the potential by 3 volt. The capacitance is 31. The unit of capacitance is 32. A capacitor is a device to store 33. The number of electric lines of force originating from 1 coulomb charge is 34. Non polar molecule is 35. Polar molecule is 36. The magnitude of the induced dipole moment p is directly proportional to 37. The equation for the capacitance of a parallel plate capacitor with a dielectric is..... 38. When three capacitors C_1, C_2 and C_3 are connected in parallel, then $C_p =$ 39. Greater the radius of a conductor, is the charge density. 40. Van de Graaff generator produces a potential in the order of volt. 41. Like charges and unlike charges each other. 42. If there are 3 electrons in a body, then the total charge of the body $q =$ 43. The permittivity of a medium is 44. The total number of electric lines of forces from a point charge 9 C in free space is nearly $N =$... 45. The equation for the torque on an electric dipole is 46. Electric potential energy is of a system of 3 C and 6 C separated by 18 cm is J 47. The capacitances of a parallel plate capacitor with and without dielectric are $90 \mu F$ and $9 \mu F$. Then ϵ_r is 10 48. In micro wave oven, are used. 49. An electric dipole contains charges -3 C and $+3 \text{ C}$ separated by 1 nm. The dipole moment is 50. The work done in moving a charge between any two points on an equipotential surface is ... | <p>electrostatics
positively charged
insulators
$F = q_1 q_2 / 4\pi\epsilon_0 r^2$
$5 q$
8.854×10^{-12}
1
$F = Eq_0$
$C m$
$E = 2p / 4\pi\epsilon_0 r^3$
$E = p / 4\pi\epsilon_0 r^3$
$\tau = pE \sin \theta$
$-q, +q$
zero
$E = -dV / dr$
flux
volt
$V m^{-1}$
27×10^5
$V = p \cos \theta / 4\pi\epsilon_0 r^2$
potential energy
$N m^2 C^{-1}$</p> <p>Gauss law
$\lambda / 2\pi\epsilon_0 r$
$\sigma / 2\epsilon_0$
σ / ϵ_0
$q / 4\pi\epsilon_0 R^2$
zero
electrostatic induction
$3 \mu F$
farad
charges
1.129×10^{11}
O_2, N_2, H_2
$N_2 O, H_2 O, HCl, NH_3$
E
$\epsilon_0 \epsilon_r A / \epsilon_r (d-t) + t$
$(C_1 + C_2 + C_3)$
smaller
10^7
repel, attract
$3e$
$\epsilon_0 \cdot \epsilon_r$
10^{12}
$\vec{\tau} = \vec{p} \times \vec{E}$
9×10^{11}
10
microwaves
$3 \times 10^{-9} \text{ Cm}$
zero.</p> |
|--|---|

+2 Physics**UNIT : 2 CURRENT ELECTRICITY****Answers**

1. A charge of 180 C passes through a lamp in 3 minutes. The current through it is
2. A material through which the electric charges can flow is called
3. The current is proportional to the velocity.
4. A toaster operating at 240 V has a resistance 60 ohm. The power is equal to watt.
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7. If the resistance of the coil at 0°C is 1 ohm and $\alpha = 0.004/^{\circ}\text{C}$, the resistance at 100°C is
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37. The resistivity of copper is $2 \times 10^{-8}\Omega\text{m}$. The conductivity of it is mho m^{-1}
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- 1 A
conductor
drift
960
2
decreases
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mobility
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 10^8 to 10^{14}
infinity
10%, 5%, 2%, 1%
12 ohm
charges
Kirchoff's laws
energy
25
- 6 ohm
960
3 / 2
wattmeter
kg / C
dil H_2SO_4
 Zn^{++}
2
secondary cell
very low
 $m = zIt$
1.08
4volt
- 0.1
 10^{-3} joule
 10^6
4 and 8
 5×10^7
- 1.25×10^{-4}
5 / 4
 36×10^5
electromotive force
current
conventional current
 $F = Ee$
 $\text{m}^2 \text{V}^{-1} \text{s}^{-1}$
current density
 10^{-2} to 10^4
superconductors
very small
semiconductors

+2 Physics

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Answers

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30. Sn, Au, Ag, Zn, Cd, Sb show effect.
31. Bi, Ni, Pt, Co, Fe, Hg show effect.
32. Seebeck effect is a process.
33. The thermo emf produced in Bi- Ag thermo couple is Bi-Sb thermo couple.
34. Peltier coefficient depends on pair of metals in contact and the of the junction.
35. The unit of the magnetic induction is
36. The magnetic induction due to infinitely long straight conductor carrying current is $B = \dots$
37. Around a current carrying conductor magnetic field is associated. This was observed by...
38. Tangent galvanometer is most sensitive for a deflection of
39. Tangent law is $B = \dots$
40. law can be written as $\int B \cdot dl = \mu_0 I_0$.
41. When a charged particle moves in a circular path in a magnetic field, the time period is $T = \dots$
42. The torque on a rectangular coil of wire in a magnetic field is
43. The deflection per unit current is called sensitivity of a galvanometer.
44. The current sensitivity is given by $(\theta / I) = \dots$
45. To convert a galvanometer in to an ammeter, a resistance is connected in parallel with the galvanometer.
46. To convert a galvanometer in to a voltmeter, a resistance is connected in series with the galvanometer.
47. Bohr magneton value is Am^2 .
48. A current of 0.2 A flows through a circular loop of area 10 cm^2 . The magnetic dipole moment is Am^2
49. In TG, a current of 1A produces a deflection of 30° . The current that produces a deflection of 60° is A
50. The resistance of the tungsten wire of a 100W,220V bulb is ohm.

- Joule's heating
3380
low
neutral
volt
lead
volt / °C
thermal radiations
 $\mu_0 n I / 2a$
tangent law
 $2a B_H / \mu_0 n$
 $Bqv \sin \theta$
parallel
voltage
infinite
magnetic dipole moment
 8.8×10^{10}
radial
BII
cyclotron
neutral
Seebeck
Joule's heating
zero
thermoelectric
Vt
nichrome
 $\alpha \theta + \frac{1}{2} \beta \theta^2$
 $\pi I t$
Positive Thomson
Negative Thomson
reversible
smaller than
temperature
tesla
 $\mu_0 I / 2\pi a$
Oersted
 45°
 $B_H \tan \theta$
Ampere's circuital
 $2\pi m / Bq$
 $n B I A \sin \theta$
current
 $n B A / C$
low
high
 9.27×10^{-24}
 2×10^{-4}
3
484

+2 Physics

Unit : 4 Electro magnetic induction and Alternating currents

Answers

1. Lenz law is in accordance with the law of conservation of
2. The self inductance of a straight conductor is
3. The unit henry can also be written as
4. Transformer works on currents only.
5. The part of the AC generator that passes the current from the coil to the external circuit is
6. The number of magnetic lines of forces crossing unit area in a magnetic field is magnetic
7. Electromagnetic induction was discovered by
8. Fleming's right hand rule is also called as rule.
9. The unit of self inductance is
10. The energy stored in an inductor is given by $E = \dots\dots\dots$
11. The equation for the mutual induction of two long solenoids is $M = \dots\dots\dots$
12. The induced emf by changing the area enclosed by a coil in a magnetic field is $e = \dots\dots\dots$
13. When the plane of a coil is perpendicular to a magnetic field, the induced emf is
14. AC generator is a device used for converting the mechanical energy into
15. If a number armature coils are used in the alternator, it is called as alternator.
16. Electro magnetic brakes use current
17. Transformer works on the principle.
18. The ratio of the output power to the input power of a transformer is called
19. Eddy current losses are minimized by using a core made of an alloy of steel.
20. The frequency of AC used for domestic power in India is
21. The average value of the AC over one complete cycle is
22. The relation between I_{rms} and I_0 is
23. In an AC circuit containing R only, the phase difference between current and voltage is
24. The inductive reactance X_L is given by $X_L = \dots\dots\dots$
25. A capacitor offers infinite resistance to current.
26. In RLC circuit, the instantaneous current is given by $I = \dots\dots\dots$
27. The equation for Q factor is given by $Q = \dots\dots\dots$
28. The average power consumed over a complete cycle is $P_{av} = \dots\dots\dots$
29. Choke coil is used to control the current in an circuit.
30. Choke coils are used in tubes which work on alternating currents.
31. The reactance of an inductor is proportional to the frequency.
32. Shell type cores are used to minimize losses.
33. The number of magnetic lines of forces crossing a closed area is called magnetic
34. The selectivity or sharpness of a resonant circuit is measured by the factor.
35. The ratio of the voltage across a coil or capacitor to the applied voltage is called as
36. For normal frequencies, the Q factor lies between
37. For radio frequencies, air chokes are used. These chokes are called as chokes.
38. Whenever there is a change in the magnetic flux linked with a closed circuit, an emf is induced in it. This phenomenon is called
39. In Fleming's right hand rule, the middle finger points the direction of the
40. The property of the coil which enables to produce an opposing induced emf in it when the current in the coil changes is called
41. If two coils are wound on a soft iron core, the mutual induction is
42. The induced emf is given by the equation $e = \dots\dots\dots$
43. In fans, motors are used.
44. In step up transformers, the transformer ratio k is than one.
45. A power of 11kW is transmitted at 5.5kV through a transmission line of $R=1$ ohm. The power loss =
46. In an AC circuit with C only, the phase difference between the current and the voltage is
47. In an LCR circuit, at resonance, the impedance is and the current is maximum.
48. The rms value of the AC is times the peak value of the alternating current.
49. The direction of the eddy current can be noted by
50. In a three phase AC generator, the emf's of the coils differ by

- energy
- zero
- $V s A^{-1}$
- alternating
- brushes.
- induction
- Michael Faraday
- generator
- H
- $\frac{1}{2} L I_0^2$
- $\mu_0 N_1 N_2 A / l$
- Blv
- zero
- electrical energy
- poly phase
- eddy
- electromagnetic induction
- efficiency
- stelloy
- 50 Hz
- 0
- $I_{rms} = I_0 / \sqrt{2}$
- 0
- $L \omega$
- direct
- $I_0 \sin(\omega t \pm \phi)$
- $1 / R (\sqrt{L/C})$
- $E_{rms} I_{rms} \cos \phi$
- AC
- fluorescent
- directly
- flux
- flux
- quality
- quality factor
- 10 and 100
- R F or H F
- electromagnetic induction
- induced current
- self induction
- very large
- $E_0 \sin \omega t$
- induction
- greater
- 4 W
- $\pi / 2$
- minimum
- 0.707
- Lenz's law
- 120°

+2 Physics Unit – 5 Electromagnetic waves and wave optics Answers

1. Electromagnetic waves are discovered by _____
2. An accelerated charge is a source of _____
3. Electromagnetic waves are _____ in nature.
4. The relation between the velocity of light C , μ_0 and ϵ_0 is given by the relation $C =$ _____
5. Hertz produced electromagnetic waves of frequency _____
6. Electromagnetic waves cover a wide range of _____
7. Atoms and molecules in an electric discharge tube give _____ rays.
8. The wavelength range of microwaves is _____
9. The frequency range of X rays is _____
10. The frequency range of FM band is from _____
11. In Physiotherapy, _____ lamps are used.
12. The wavelengths of the sodium emission lines are _____ .
13. The _____ spectrum is used to identify the gas.
14. Incandescent solids, carbon arc lamp etc. give _____ spectrum.
15. Using _____ spectra, the molecular structure of the substance can be studied.
16. The example of line absorption spectrum is _____ spectrum.
17. The sun's outer layer is called _____
18. The type of delayed fluorescence is called _____
19. According to corpuscular theory, light energy is the kinetic energy of the _____
20. Huygens assumed that light waves are _____ in nature.
21. The energy of each photon is given by the equation _____
22. The scattering of sunlight by the molecules of the earth's atmosphere is called _____
23. The scattering of light by the colloidal particles is called _____ effect.
24. In industry, _____ spectroscopy is applied to study the properties of the materials.
25. The locus of the particles having the same state of vibration is called as _____
26. A linear source of light will give rise to _____ wavefront.
27. _____ principle helps us to locate the position and the shape of the wavefront.
28. In reflection of light, the angle of incidence = the angle of _____
29. For total internal _____ to take place, light must travel from denser medium to rarer medium.
30. The equation of bandwidth of interference fringes is $\beta =$ _____
31. An important application of interference in thin films is the formation of _____ rings.
32. The radius of the n^{th} dark ring equation is _____ .
33. The amount of bending in diffraction depends on the _____
34. In Fresnel diffraction, the incident wavefront is either _____ .
35. Using spectrometer, _____ diffraction can be observed.
36. The combined width of a slit and a ruling is called _____
37. In a plane diffraction grating, $\lambda =$ _____
38. The phenomenon of _____ proves that light waves are transverse.
39. The plane perpendicular to the plane of vibration is called plane of _____
40. A device that produces a plane _____ light is called polariser.
41. The angle of incidence at which the reflected beam is completely plane polarised is angle of _____
42. The equation for Brewster's law is $\mu =$ _____
43. The polarising angle for glass is _____
44. The pile of plates uses the polarisation by _____ phenomenon.
45. The double refraction phenomenon was discovered by _____
46. Crystals like mica, topaz etc. having two optic axes are called _____
47. The refractive index for Canada balsam cement is _____ for both the rays.
48. H polaroids use a thin film of _____
49. Polaroids are used as _____ glasses
50. In an EM wave, the angle between the electric and the magnetic field vectors are at _____.

J.C.Maxwell
electromagnetic radiation
transverse
 $1 / \sqrt{\mu_0 \epsilon_0}$
 5×10^7 Hz
wavelengths or frequencies
UV
 10^{-3} m - 0.3 m
 3×10^{18} to 10^{16} Hz
88 MHz to 108 MHz
infra-red
 5896 \AA and 5890 \AA
line
continuous
band
solar
chromosphere
phosphorescence
corpuscles
longitudinal
 $E = h \gamma$
Rayleigh scattering
Tyndal
Raman
wavefront
cylindrical
Huygen
reflection
reflection
 $\lambda D / d$
Newton's
 $r_n = (n R \lambda)^{1/2}$
wavelength of the incident wave
spherical or cylindrical
Fraunhofer
grating element
 $\sin \theta / Nm$
polarisation
polarisation
polarized
polarisation
 $\tan i_p$
 57.5°
reflection
Bartholinus
biaxial crystals
1.550
polyvinyl alcohol
sun
 90°

With thanks - from

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