

### PHY101 quiz 3(2022)

1. Lenz's law is in accordance with law of conservation of

Energy...confirm

2. Which of the following types of electromagnetic radiation at the greatest speed in vacuum?

All of these travels at the same speed.....confirm

3. Inductive reactance  $X_L$  of an inductor is

a.  $2(\pi)fL$ ....confirm

4. Force per unit charge is:

Electric field intensity...confirm

5. The sum of electric and magnetic force is called

Lorentz force...confirm

6. Radio waves and light waves are \_\_\_\_\_.

Electromagnetic and transverse both...confirm

7. Kirchhoff's 1st rule is the manifestation of the law of conservation of

Charge...confirm

8. Kirchhoff's 2nd rule is the manifestation of the law of conservation of

Energy...confirm

9. The total energy in an circuit is  $5.0 \times 10^{-6}$  J. if  $L=25$ mH the maximum current is:

20mA...confirm

Download More Quizzes Files From  
VUAnswer.com

10. If  $I_0$  is the peak value of an AC supply, then its rms value is given as firms

$I_0/\text{square root}2$ ....confirm

11. The potential difference between the ends of a conductor is 12V. How much electrical energy is converted to other forms of energy in the conductor when 100C of charge flows through it?

1200J....confirm

12. A particle carrying a charge of  $2e$  falls through potential difference of  $3V$  the energy acquired by it will be:

6 eV...confirm

13. An inductor may store energy in its:

Magnetic field...confirm

14. The graphical representation of Ohm's law is:

Straight line...confirm

15. Radio waves and light waves are \_\_\_\_\_.

Longitudinal waves...confirm

[Download More Quizzes Files From VUAnswer.com](#)

16. The increase in capacitance of a capacitor due to presence of dielectric is due to:

Electric polarization

17. The Focal length of convex lens is:

Positive...confirm

18. The AC circuit in which current and voltage are in phase the power factor is

1...confirm

19. The wavelength of red light is  $700\text{ nm}$ . Its frequency is \_\_\_\_\_.

$4.29 \times 10^{14}$  hertz...confirm

20. The known laws of electromagnetism before James Clerk Maxwell were following EXCEPT

Faraday's Law...confirm

[Download More Quizzes Files From VUAnswer.com](#)

21. When some dielectric is inserted between the plates of a capacitor, then capacitance;

Increased.....confirm

22. Which of the following is NOT the characteristic of electromagnetic waves?

- i. They can travel with different speeds in vacuum depending on frequency.....confirm

23. If electric and gravitational force on an electron in uniform electric field balance each other, then the intensity of electric field will be:

$$Mg/q$$

23. The increase in capacitance of

Larger plates provide greater capacity to store electric charge. Therefore, as **the area of the plates increase**, capacitance increases. Capacitance is directly proportional to the electrostatic force field between the plates. ... Therefore, as the dielectric constant increases, capacitance increases. 07-Jun-2017

a

Electric energy is measured

Watt...confirm

When we accelerate the charge, which types of waves are produced?

Electromagnetic waves....confirm

A particle device transmitted a signal in the form of electromagnetic waves of frequency  $7.5 \times 10^8$  Hz. What is the wavelength of the signal?

0.4m

A step-down transformer is used to:

Decrease the voltage

27. The quantity of  $\Delta V / \Delta r$  is called

Potential gradient

28. Which electromagnetic radiation transmits the highest photon energy?

Gamma rays....confirm

29. The reaction of a particle at 50 Hz is 10.0 its reactance at 100Hz becomes

5.0

30. Work done on a charged particle moving in uniform magnetic field is

Zero....confirm

31. Select the correct statement

Gamma Rays have higher frequency than infrared waves...confirm

Download More Quizzes Files From  
[VUAnswer.com](http://VUAnswer.com)

32. Which of the following have the greatest wavelength?

Radio waves

33. Potentiometer can be used as

Potential divider....confirm

34. All of the followings are the different types of mental images; people generally experience them while close their eyes except:

Solving an algebra equations

35. The notion that motivational state of the organism is understood and explained in terms of positive and negative environmental stimuli BEST connects to;

Incentive approaches

36. If one wants to increase the capacity of short-term memory, through which process more items can be held?

Chunking....confirm

37. Which physical quantity is produced by a calculation where a charge is

Energy...confirm

38. The current in a car headlamp is 2.0 A. The Headlamp is switched on for 3.0

360 C

[Download More Quizzes Files From](#)

[VUAnswer.com](http://VUAnswer.com)

39. If potential difference across two plates of a capacitor is doubled, then

Four times....confirm

40. How could the unit of potential difference the volt also be written?

J/C

41. If magnetic field is doubled then magnetic energy density becomes

Four times....confirm

42. The primary of a 3.1 step-up transformer is connected to a source and the secondary this situation is P. If R is connected directly to the source it will dissipate a power of:

P/9....confirm

43. A particle having  $2e$  charge falls through a potential difference of  $5V$  energy acquired by it is

10 eV

44. A generator supplies  $100V$  to the primary coil of a transformer. The primary has 50 turns and the secondary has 500 turns. The secondary voltage is

1000V

45. The combined effect of resistance and reactance is known as

Impedance...confirm

46. A transparent refracting medium bounded by the two curved surfaces called

Prism....confirm

[Download More Quizzes Files From](#)

[VUAnswer.com](http://VUAnswer.com)

47. A student rubs a rod held in his hand. Which action causes the rod to gain a large electrostatic charge

Rubbing a polythene rod with a woolen duster....confirm

48. A charge of  $30 C$  flows through an electric appliance in  $2.0$  minutes. What is the average current in the appliance?

0.25A....confirm

Total flux through a closed surface depends on

Charge and  $-N$ ...confirm

49. Electromagnetic waves emitted from antenna are

Transverse....confirm

50. Two parallel straight wires carrying current in same direction will.

Attract each other...confirm

51. Charge carriers in electrolysis are:

Positive and negative ions...confirm

52. Capacitive reactance  $X_C$  is

$1/2\pi fC$

53. The number of turns becomes double, but length remain same then magnetic field in the solenoid become

Double...confirm

54. If velocity of a conductor moving through Magnetic field B is made zero then motional emf is

-vBL

The amplitude modulation frequency ranges from

540 kHz to 1600 kHz...confirm from net

55. Average value of current and voltage over complete cycle is:

Zero.... Confirm

56. A detector is used to detect the speed at a particular wave if the frequency of an electromagnetic signal is 400 MHz, the speed define the detector is

300000 km/s

57. The product of resistance and capacitance is called

Time....confirm

58. Greenhouse gases absorb \_\_\_\_ radiation

Infrared...confirm

59. In RL series circuit phase angle is given by:

$\tan^{-1}(wL/R)$ ...confirm

[Download More Quizzes Files From](#)

[VUAnswer.com](http://VUAnswer.com)

60. One tesla is equal to

N/Am

61. An LC series circuit an inductance L and a capacitance C has an oscillation frequency f. Two inductors each with inductance L, and two capacitors, each with capacitance C, are all wired in series and the circuit is completed. The oscillation frequency is:

f.....confirm

62. Capacitance of a capacitor in vacuum is given by

$A\epsilon_0/d$ ....confirm

63. Force on a charged particle is zero when projected at angle with the magnetic field

0 degree....confirm

64. If an electron of charge is accelerated through a potential difference V, it will acquire energy.

Ve....confirm

65. In case of metallic conductors, the charge carriers are:

Electrons...confirm

66. Tesla is a unit of

Magnetic flux....confirm

67. When a charge is projected perpendicular to a uniform magnetic field, its path is:

Circular.....confirm

68. Electromagnetic waves do not transport

Charge....confirm

69. The concept of an electric field lines is introduced by

Faraday....confirm

70. A capacitor in an LC oscillator has a maximum potential difference of 15V and a maximum energy of 360 uJ. At a certain instant the energy in the capacitor is 40 uJ. At that instant what is the emf induced in the inductor

5V....confirm

71. The wave form of alternating voltage is a:

Sine wave....confirm

72. If velocity of a conductor moving through a magnetic field B is made zero then motional emf is:

-vBL...confirm

72. Which one of is in the order of decreasing frequency?

Ultraviolet rays, visible light, radio waves...confirm

Download More Quizzes Files From

73. The lenz's law refers to:

VUAnswer.com

Induced current....confirm

74. Which of the following statements is Not true about electromagnetic waves?

The electromagnetic radiation from a burning candle is polarized...confirm

75. Phase different between V and I of on A.C through resistor is:

Download More Quizzes Files From

[VUAnswer.com](http://VUAnswer.com)

0 degree

76. Which of the following is equivalent to 1 V?

1 J/C.....confirm

77. Which of the following is equivalent to one coulomb?

One ampere second....confirm