

F.Y.B.Sc. Sem-II Sample Questions Physics –II

1) form factor for a pure sine wave is-----

a)0.707 b)1.11 c)1.414 d)none of these

2)The r.m.s. Value of a sinusoidal A.C current is equal to its value at an angle of -----degree

a)30 b)45 c)60 d)90

3)The Hay's bridge is Suitable for the measurement of inductance of coils with Q-factor-----

a)greater than 10 b)less than 1 c)less than 10 d)greater than 1

4)In a De-Sauty bridge,if $R_1 = 800\Omega$, $R_2 = 1200\Omega$, $C_1 = 0.47\mu\text{f}$ what will $C_2 =$

a)0.212 μf b)0.313 μf c)0.414 μf d)0.515 μf

5)for an Ideal current Source,internal resistance is-----

a)infinite b)finite c)zero d)none of these

6)Thevenin's equivalent of a circuit consists of a single equivalent voltage Source V_{TH} and R_{TH} are in-----

a)parallel b)series c)paraseries d)none of these

7)Rectifier is a device which convert -----

a)d.c to a.c b)a.c to d.c c)voltage to current d)current to voltage

8)The diode conducts only in -----

a)forward bias b)reverse bias c)both bias d)none of these

9) Proper working of clamper circuit the time constant of the circuit should be-----

a) small b) large c) constant d) none of these

10) The AND gate is NAND gate is followed by-----

a) NOT b) NOR c) OR d) EX-OR

11) The Universal gate is-----

a) NOR b) OR c) AND d) EX-OR

12) The out put of EX-OR gate is high-----

a) when both the inputs are high b) when any one input is high

c) when both the input are low d) none of these

13) Electrostatic energy is stored in-----

a) medium b) electric field c) charge d) all of these

14) The electric field inside a spherical shell of uniform surface charge density-----

a) zero b) constant c) infinite d) finite

15) A Proton, deuterium and alpha particle are accelerated through the same potential difference, K.E. will be the ratio of -----

a) 2:1:1 b) 2:2:1 c) 1:1:2 d) 1:2:2

16) Coloumb's law does not depend-----

a) mass b) charge c) distance d) none of these

17) Outside of the core of the toroid the magnetic field is-----

- a) zero b) uniform c) non uniform d) none of these

18) A junction diode can be used-----

- a) an Oscillator b) an Amplifier c) A rectifier d) Voltage regulator

19) Hay bridge is particularly useful for measuring-----

- a) Self inductance
b) Capacitance
c) Inductive Impedance
d) none of these

20) SI unit of magnetic field Intensity is-----

- a) ohm b) Tesla c) watt d) volt

21) If the magnetic field at a point 5cm is 2×10^{-5} tesla-----

- a) 5A b) 10A c) 15A d) 20A

22) At resonance, in series LCR Circuit the applied e.m.f and current flowing through the circuit have a phase difference of-----

- a) 0 b) π c) $\pi/2$ d) $\pi/4$

23) Form factor is the ratio of-----

- a) average value/r.m.s value b) average value/peak value
c) r.m.s value/average value d) none of these

24) SI unit of inductance is-----

a)tesla b)henary c)watt c)farad

25)A.B =

a)A.B b)A+B c)A-B d)A.B