Physics - ICS Part 2 Physics Chapter 16 Short Questions Preparation

Q1. Define choke and electromagnetic waves.

Ans 1: A choke is a coil made of thick insulated copper wire wound closely in a large numbers of turns over a soft iron laminated core,It is used to control alternating current through a circuit without much loss of energy.

Ans 2: Electromagnetic waves are those which require no medium for transmission and rapidly propagate through vaccum e.g visible light, x rays,gamma rays.

Q2. Define A.C current.

Ans 1: A.C is that which is produced by a voltage source whose polarity keeps in reserving with time.

Q3. What is the root mean square value of current?Explain.

Ans 1: The square root of mean square values of current is called root mean square value of current.The average value of current over a cycle is zero but the power delivered during a cycle is not zero because power is I^2R and the value are positive even for negative values of I.

Q4. Give any two properties of parallel resonant circuit.

Ans 1:

1. At resonance frequency the circuit impedance is maximum.
2. At resonance the circuit current is minimum and is in phase with the applied voltage.

Q5. Define impedance and write its SI unit.

Ans 1: The combined effect of resistance and reactance is an AC circuit is known as impedance.It is donated by Z and its SI unit is ohm.

Q6. Define impedance and resonant frequency.

Ans 1: A measure of the opposition to the flow of charged is an AC circuit is called impedance.It is the combined effects of resistance and inductive and capacitive reactance is.Its unit is in ohm"s.
The frequency at which inductive and capacitive reactance become equal is called resonant frequency.

Q7. What is difference between A.C circuit and D.C circuit?

Ans 1: In A.C circuit.in addition to resistor A,inductor and capacitor are used to control the current and voltage.

Ans 2: In D.C circuit,resistor R is used to control the current and voltage.

Q8. Write advantage and disadvantage of FM and AM.

Ans 1: Advantage:

1. FM transmission frequencies are much higher and range between 88 MHz to 108 MHz.AM transmission frequencies range from 540 KHz to 1600 KHz.
2. FM radio waves are affected less by electrical interference than AM radio waves.

Disadvantage:

1. FM have a short range than AM.
2. FM are less able to travel around obstacles such as hills and large buildings.

Ans 2:

Q9. What do you know mean by phase lag and phase lead?

Ans 1: The angleθ which specifiesthe instantaneous value of the alternative voltage current,gives the phase lag or phase lead of one quantity over the other.The phase differencebetween two alternative quantity is observed at different points.The quantity which has greater phase at all points is said to be leading and the other is said to be laggingbehind.

Q10. Define reactance of a capacitor.

Ans 1: The opposition offered by a capacitor in the flow of A.C is called capacitive reactance.It varies inversely with the frequency of A.C.
