

Physics - 12th Class Physics Chapter 5 Short Questions Preparation

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Ans 1: Because it can transmit to long distance easily and at a very low cost, its power losses are very small and it may step up or step down by means of a transformer.

Q2. 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.

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

Q1. What is the main reason for the world wide use of A.C/

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 I²R and the value are positive even for negative values of I.

Q4. Define peak to peak value of A.C voltage.

Ans 1: It is the sum of the positive and negative peak values, if V_0 is the peak value of the voltage waveform then p-p value is $2V_0$.

Q5. 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.

Q6. Define phase of alternating voltage.

Ans 1: The angleθ=wt which specifies the instantaneous value of the alternating voltage or current is known as its phase.

Q7. Define Instantaneous Value and Peak value of current.

Ans 1: The value of current or voltage at any any instant is called instantaneous value and the maximum value of current or voltage is called peak value.

Q8. Write advantage and disadvantage of FM and AM.

Ans 1: Advantage:

- 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.

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Q9. Define reactance, Describe the condition which will make the reactance small.

Ans 1: The opposition offered by capacitor or inductor to the flow of alternating current is called reactance. For a capacitor reactance will be small when frequency is large and for an inductor reactance will be small when frequency is small.

Q10. How many times per second will an incandescent lamp reach maximum brilliance when connected to a 50 Hz source? Explain.

Ans 1: An incandescent lamp will reach maximum brilliance two time in cycle. One time for positive half cycle and one negative half cycle.