

Physics ECAT Pre Engineering Chapter 16 Alternating Current

Sr	Questions	Answers Choice
1	Which of the following diodes can operate in the reverse biased condition	A. photo diode B. light emitting diode C. photo voltaic cell D. none of these
2	At resonance frequency the impedance of parallel resonance circuit is	A. Maximum B. Minimum C. Zero D. None of the above
3	Unless stated otherwise, when we speak of A.C. meter reading, we usually mean:	A. Peak value B. RMS value C. Instantaneous value D. Peak-to-peak value E. Both (A) and (C)
4	If we connected the ordinary DC ammeter to measure alternating current, it would measure its:	A. Instantaneous value B. RMS value C. Value averaged over a cycle D. Either (B) or (C) E. Either (A) or (C)
5	At resonance, the impedance of RLC series circuit is	A. Maximum B. Zero C. Minimum D. Determinate
6	When the pn-junction is connected reversed biased, its resistance is of the order of	A. few ohms B. few kilo-ohms C. few mega-ohms D. few mili-ohms
7	A P-N junction or semiconductor diode cannot be used as	A. A rectifier B. Detector C. Oscillator D. An amplifier
8	Which one of the following waves belongs to electromagnetic spectrum	A. Radio and TV waves B. Radar waves C. Micro waves D. All of them
9	The phase at the positive peak of an A.C. cycle is:	A. 0 B. 90 C. 180 D. 270

		<p>D. $\frac{V}{\sqrt{2}}$ and $\frac{I}{\sqrt{2}}$</p> <p>E. $\frac{V}{\sqrt{2}}$ and $\frac{I}{\sqrt{2}}$</p>
10	The RMS value of alternating current is:	<p>A. 0.7 times at the peak value</p> <p>B. 0.5 times the peak value</p> <p>C. 0.7 times the Instantaneous value</p> <p>D. Equal to maximum voltage</p> <p>E. None of these</p>
11	The highest value reached by the voltage or current:	<p>A. In quarter cycle is called Instantaneous value</p> <p>B. In half cycle is called peak-to-peak value</p> <p>C. In one cycle is called peak value</p> <p>D. In half cycle is called Instantaneous value</p> <p>E. None of these</p>
12	The amplifier which is used to perform mathematical operations electronically is known as	<p>A. calculator</p> <p>B. OP-AMP</p> <p>C. computer</p> <p>D. any one of them</p>
13	During the negative half-cycle of the half-wave rectification, the diode	<p>A. does not conduct</p> <p>B. conducts</p> <p>C. either of these</p> <p>D. none of these</p>
14	The length of rotating vector (on a certain scale) represents the:	<p>A. Peak value of alternating quantity</p> <p>B. RMS value of alternating quantity</p> <p>C. Instantaneous value of alternating quantity</p> <p>D. Either (B) or (C)</p> <p>E. Either (A) or (B)</p>
15	The impedance of RLC series resonance circuit at resonant frequency is	<p>A. Greater than R</p> <p>B. Equal to R</p> <p>C. Less than R</p> <p>D. None of these</p>
16	Which one of the following Electro-magnetic wave have the highest frequency and shortest wave-length	<p>A. X-rays</p> <p>B. Ultraviolet rays</p> <p>C. γ-rays</p> <p>D. Cosmic rays</p>
17	The device which allows only the flow of an A.C. through a circuit is	<p>A. Capacitor</p> <p>B. Inductor</p> <p>C. D.C. motor</p> <p>D. Battery</p>
18	A changing magnetic flux creates around itself	<p>A. An electromotive force</p> <p>B. An electric field (changing electric flux)</p> <p>C. Magnetic field</p> <p>D. None of the above</p>
19	To design a resonant circuit of frequency 100 KHz with an inductor of inductance 5 mH, we need a capacitor of capacitance	<p>A. 5.07 pF</p> <p>B. 50 pF</p> <p>C. 0.507 pF</p> <p>D. 507 pF</p>

Mathematical manipulation of the two quantized states can be best carried if they are represented by

- A. high - low
 - B. yes - no
 - C. on - off
 - D. 0 - 1
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