

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 reverse 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. 360°

		D. $v = \frac{V_m}{\sqrt{2}} \sin(\omega t + \phi)$
		E. $v = \frac{V_m}{\sqrt{2}} \sin(\omega t + \phi) + \frac{V_m}{\sqrt{2}} \sin(\omega t + 90^\circ)$
10	The RMS value of alternating current is:	A. 0.7 times at the peak value B. 0.5 times the peak value C. 0.7 times the Instantaneous value D. Equal to maximum voltage E. None of these
11	The highest value reached by the voltage or current:	A. In quarter cycle is called Instantaneous value B. In half cycle is called peak-to-peak value C. In one cycle is called peak value D. In half cycle is called Instantaneous value E. None of these
12	The amplifier which is used to perform mathematical operations electronically is known as	A. calculator B. OP-AMP C. computer D. any one of them
13	During the negative half-cycle of the half-wave rectification, the diode	A. does not conduct B. conducts C. either of these D. none of these
14	The length of rotating vector (on a certain scale) represents the:	A. Peak value of alternating quantity B. RMS value of alternating quantity C. Instantaneous value of alternating quantity D. Either (B) or (C) E. Either (A) or (B)
15	The impedance of RLC series resonance circuit at resonant frequency is	A. Greater than R B. Equal to R C. Less than R D. None of these
16	Which one of the following Electro-magnetic wave have the highest frequency and shortest wave-length	A. X-rays B. Ultraviolet rays C. y-rays D. Cosmic rays
17	The device which allows only the flow of an A.C. through a circuit is	A. Capacitor B. Inductor C. D.C. motor D. Battery
18	A changing magnetic flux creates around itself	A. An electromotive force B. An electric field (changing electric flux) C. Magnetic field D. None of the above
19	To design a resonant circuit of frequency 100 KHz with an inductor of inductance 5 mH, we need a capacitor of capacitance	A. 5.07 pF B. 50 pF C. 0.507 pF D. 507 pF

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
