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1. A sine wave has a frequency of 50 Hz. Its angular frequency is _____ radian/second.
(a) 100 n
(b) 50 jt
(c) 25 JT
(d) 5 n
Ans: a

2. The reactance offered by a capacitor to alternating current of frequency 50 Hz is 20 Q. If frequency is increased to 100 Hz, reactance becomes_____ohms.
(a) 2.5
(b) 5
(c) 10
(d) 15
Ans: c

3. The period of a wave is
(a) the same as frequency
(6) time required to complete one cycle
(c) expressed in amperes
(d) none of the above
Ans: b

4. The form factor is the ratio of
(a) peak value to r.m.s. value
(6) r.m.s. value to average value
(c) average value to r.m.s. value
(d) none of the above
Ans: b

5. The period of a sine wave is _____ seconds.
Its frequency is
(a) 20 Hz
(b) 30 Hz
(c) 40 Hz
(d) 50 Hz
Ans: d

6. A heater is rated as 230 V, 10 kW, A.C. The value 230 V refers to
(a) average voltage
(b) r.m.s. voltage
(c) peak voltage
(d) none of the above
Ans: b

7. If two sinusoids of the same frequency but of different amplitudes and phase angles are subtracted, the resultant is
(a) a sinusoid of the same frequency

(b) a sinusoid of half the original frequency
(c) a sinusoid of double the frequency
(d) not a sinusoid
Ans: a

8. The peak value of a sine wave is 200 V. Its average value is
(a) 127.4 V
(b) 141.4 V
(c) 282.8 V
(d)200V
Ans: a

9. If two sine waves of the same frequency have a phase difference of JT radians, then
(a) both will reach their minimum values at the same instant
(b) both will reach their maximum values at the same instant
(c) when one wave reaches its maxi¬mum value, the other will reach its minimum value
(d) none of the above
Ans: c

10. The voltage of domestic supply is 220V. This figure represents
(a) mean value
(b) r.m.s. value
(c) peak value
(d) average value
Ans: a