

Inter (Part-II) 2023

Physics	Group-II	PAPER: II
Time: 20 Minutes	(OBJECTIVE TYPE)	Marks: 17

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1- Wave behaviour of matter is prominent at _____ level.

- (a) Macroscopic (b) Mega structure
(c) Microscopic ✓ (d) Any object size

The points where AC crosses the time axis corresponds to phase:

- (a) $\frac{\pi}{2}$ or $3\frac{\pi}{2}$ (b) 0 or π
(c) $\frac{\pi}{4}$ or $3\frac{\pi}{4}$ (d) 0 or $\frac{\pi}{2}$ ✓

A galvanometer coil of resistance R_g gives full scale deflection with current I_g . What is required shunt resistance R_s . = _____ if range of ammeter is $I = 2 I_g$?

- (a) R_g (b) $2 R_g$
(c) $R_g / 2$ ✓ (d) $4 R_g$

A combination of two back to back PN junctions is _____.

- (a) Operational amplifier
(b) Digital gate
(c) Transistor ✓
(d) Photo diode

5- The _____ work on the principle of beats.

- (a) DC motors (b) Metal detectors ✓
(c) Choke coils (d) AC generators

6- $1 \text{ J} = \text{_____ eV.}$

- (a) 1.6×10^{-19} ✓ (b) 6.25×10^{18}
(c) 9.6×10^{-18} (d) 9×10^9

7- Faraday and Maxwell unified electric and _____ force.

- (a) Weak nuclear (b) Strong nuclear
(c) Gravitational (d) Magnetic ✓

8- Which is not true for ideal step-up transformer?

- (a) $I_s < I_p$ (b) $P_{\text{out}} = P_{\text{in}}$ ✓
(c) $V_s > V_p$ (d) $N_s = N_p$

9- A rod of length l_0 in a stationary frame is accelerated at speed of light. Its length measured perpendicular to its direction of motion is:

- (a) $\frac{l_0}{2}$ ✓ (b) Zero
(c) l_0 (d) $2l_0$

10- The slope of graph between charge and time for capacitor charging is large initially when the product RC is:

- (a) Small (b) Large ✓
(c) Intermediate (d) Infinite

11- A ductile wire is stretched to double of its original length, %age elongation is _____.

- (a) 200% (b) 50%
(c) 100% ✓ (d) 400%

12- The fractional change in resistance is minimum for _____ if temperature change is same for all

- (a) Platinum (b) Nichrome
(c) Copper ✓ (d) Constantan

13- If
en
hy

(a)

(c)

14- The
amp

(a)

(c)

15- Ener
nuc

(a)

(c)

16- In
res

(a)

(c)

17- The

(a)

(c)

- 13- If ionization energy of hydrogen atom is E_0 , the energy required to remove electron from hydrogen in state $n = 4$ is:

(a) $\frac{E_0}{4}$ ✓ (b) $4E_0$
(c) $\frac{E_0}{16}$ (d) Zero

- 14- The value of voltage gain of a transistor amplifier (common emitter) is of the order of:

(a) Thousands (b) Millions
(c) Fraction (d) Hundreds ✓

- 15- Energy required to remove all nucleons from nuclide of _____ is maximum.

(a) Fe^{58} ✓ (b) U^{235}
(c) Ba^{141} (d) H^2

- 16- In alternating current, _____ behave like resistors.

(a) Inductors ✓ (b) Capacitors
(c) Transformers (d) Generators

- 17- The potential of _____ is least in CRO.

(a) Anode ✓ (b) Screen
(c) Cathode (d) Grid