

$= 2 \text{ mVe}$

(i)

ng voltage V 1-1-

$1.6 \times 10^{-19} \text{ C}$

ystal surface
According to

m

$5^\circ = \lambda$

ength is in
wavelength.
l with protons
hereby giving
s.

ohr orbit. (3)

with $n = 1$, is

$(1.6 \times 10^{-19} \text{ C})^2$
 $6.63 \times 10^{-34} \text{ Js}$

Inter (Part-II) 2022

Physics	Group-I	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.

Work done on a charge moving in a uniform magnetic field is:

- (a) Zero ✓
- (b) Positive
- (c) Negative
- (d) Maximum

The most common source of alternating voltage is:

- (a) Motor
- (b) Cell
- (c) Generator ✓
- (d) Thermocouple

Compton effect is associated with:

- (a) Gamma rays
- (b) Beta rays
- (c) X-rays ✓
- (d) Positive rays

Alpha particle carries a charge of:

- (a) $+2e$ ✓
- (b) $-2e$
- (c) $+e$
- (d) Zero

The difference of potential energy between two points per unit charge is:

- (a) Electrical potential ✓
- (b) Potential difference
- (c) Absolute potential
- (d) All of these

6- The devices which are used to convert various physical quantities into electrical voltages are called:

- (a) Filters (b) Sensors ✓
(c) Rectifiers (d) Amplifiers

7- The current flowing through each resistor of equal resistances in parallel combination is:

- (a) Different ✓ (b) Zero
(c) Same (d) Infinite

8- The Boolean expression of NAND gate is:

- (a) $X = A.B$ (b) $X = \bar{A}$
(c) $X = \overline{A.B}$ ✓ (d) $X = A + B$

9- Energy released by conversion of 1 amu mass is:

- (a) 1.6×10^{-19} eV (b) 1.6×10^{-19} MeV
(c) 200 MeV (d) 931 MeV ✓

10- The energy stored in the inductor per unit volume is:

- (a) $\frac{B^2}{2\mu_0}$ (b) $\frac{\mu_0}{2B}$
(c) $\frac{\mu_0}{2B^2}$ (d) $\frac{B^2}{2\mu_0}$ ✓

11- The space between the plates of the capacitor filled by a dielectric of dielectric constant 'k'. The capacitance of the capacitor:

- (a) Increased by a factor 'k' ✓
(b) Increased by a factor 'k²'
(c) Decreased by factor 'k'
(d) Remains unchanged

12-

is:

(a) 1

(c) I_0

13-

Unit c

(a) W

(c) T

14-

The r

(a) T

(c) F

15-

Bean

(a) X

(c) G

16-

Ligh

semi

(a) S

(b) C

(c) C

(d) C

17-

In e

(a)

(b)

(c)

(d)

- 12- The mean value of A.C. in one complete cycle is:
- (a) 1 (b) Zero ✓
(c) I_0 (d) $\frac{I_0}{\sqrt{2}}$
- 13- Unit of self-inductance is:
- (a) Weber (b) Henry ✓
(c) Tesla (d) Farad
- 14- The number of crystal systems are:
- (a) Three (b) Five
(c) Fourteen (d) Seven ✓
- 15- Beam of electron is also called:
- (a) X-rays (b) Alpha rays
(c) Gamma rays (d) Cathode rays ✓
- 16- Light emitting diodes (LEDs) are made from semiconductors:
- (a) Silicon
(b) Germanium
(c) Gallium arsenide ✓
(d) Carbon
- 17- In electronic transition, atom cannot emit:
- (a) Infrared radiations
(b) Visible radiations
(c) Gamma radiations ✓
(d) Ultraviolet radiations