Inter (Part-II) 2021

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- Output wave form of sweep or time base generator is:
- (a) Saw tooth wave ✓
- (b) Digital wave
- (c) Sinusoidal wave
- (d) Square wave

2- S.I unit of impedance is:
- (a) Henry
- (b) Hertz
- (c) Ampere
- (d) Ohm ✓

3- The rest mass energy of an electron positron pair is:
- (a) 0.51 Mev
- (b) 1.02 Mev ✓
- (c) 1.2 Mev
- (d) 1.00 Mev

4- Binding energy per nucleon is maximum for:
- (a) Helium
- (b) Iron ✓
- (c) Radium
- (d) Polonium

5- When some dielectric is inserted between the plates of a capacitor, then capacitance:
- (a) Increased ✓
- (b) Decreased
- (c) Zero
- (d) Infinity

6- Automatic functioning of street light can be done by the use of:
- (a) Inductor
- (b) Capacitor
- (c) Comparator ✓
- (d) Thermistor

7- Kirchhoff's first rule is a manifestation of law of conservation of:
- (a) Mass
- (b) Energy
- (c) Charge ✓
- (d) Kinetic energy

8- If R_1 = 10 KΩ and R_2 = 100 KΩ, then gain of inverting amplifier is:
(a) −11
(b) −10 ✓
(c) 10
(d) 11

9- The half-life of uranium −239 is:
(a) 1620 years
(b) 3.8 days
(c) 2.5 days
(d) 23.5 minutes ✓

10- The principle of an electric generator is based upon:
(a) Ampere's law
(b) Faraday's law ✓
(c) Coulomb's law
(d) Kirchhoff's law

11- Coulomb per volt is called:
(a) Ampere
(b) Joule
(c) Henry
(d) Farad ✓

12- The device which allows only flow of A.C. through it, is:
(a) Capacitor ✓
(b) Inductor
(c) Battery
(d) Thermistor

13- Energy stored in the inductor is in the form of:
(a) Electrical energy
(b) Magnetic energy ✓
(c) Kinetic energy
(d) Chemical energy

14- Very weak magnetic field produced by brain can be detected by:
(a) Compass
(b) Metallic needle
(c) Squid ✓
(d) Liquid

15- Work done on a charged particle moving in uniform magnetic field is:
(a) Maximum
(b) Zero
(c) Minimum
(d) Negative ✓

16- When platinum wire is heated, it changes to cherry red at temperature:
(a) 500ºC
(b) 900ºC ✓
(c) 1100ºC
(d) 1300ºC

17- The value of Rydberg constant is:
(a) 1.0974×10^7 m^{-1} ✓
(b) 6.02×10^{-34} m^{-1}
(c) 3×10^8 m^{-1}
(d) 1.6×10^{19} m^{-1}