

## Physics (Objective)

(GROUP-I)

Time: 20 Minutes

Marks : 1

**Note:** Write Answers to the Questions on the objective answer sheet provided. Four possible answers A, B, C and D to each question are given. Wh answer you consider correct, fill the corresponding circle A, B, C or D given in front of each question with Marker or Pen ink on the answer sheet provided.

- RWP-1-24*
- 1.1 One henry is equal to:  
 (A)  $V S^{-1} A^{-1}$  (B)  $V S A^{-1}$  (C)  $V S^{-1} A$  (D)  $V^{-1} S A$
  2. When motor is overloaded, the magnitude of back *emf* is:  
 (A) Constant (B) Increases (C) Decreases (D) Infinite
  3. In capacitor circuit phase between current and charge is:  
 (A) Parallel (B) In phase (C) Anti parallel (D) Out of phase
  4. At resonance frequency the impedance of *RLC* series circuit is:  
 (A) Minimum (B) Maximum (C) Both (A) and (B) (D) Infinite
  5. Which has least hysteresis loop area?  
 (A) Soft iron (B) Steel (C) Wrought iron (D) Cobalt
  6. During negative half cycle of A.C. , *p - n* junction has:  
 (A) Low resistance (B) No resistance (C) High resistance (D) Remain same
  7. Device which converts low voltage or current to high voltage or current is:  
 (A) Rectifier (B) Transformer (C) Inductor (D) Amplifier
  8. The momentum of photon is represented by the equation:  
 (A)  $p = mv$  (B)  $p = \frac{h}{\lambda}$  (C)  $p = \frac{\lambda}{h}$  (D)  $p = h\lambda$
  9. The energy needed by photon to create electron-positron pair is:  
 (A) 1.02 MeV (B) 0.52 MeV (C) 0.051 MeV (D) 1.51 MeV
  10. Bremsstrahlung radiations are example of:  
 (A) Molecular spectra (B) Atomic spectra (C) Continuous spectra (D) Discrete spectra
  11. 1 rem is equal to:  
 (A) 0.1 SV (B) 0.01 SV (C) 2.04 SV (D) 3.06 SV
  12. Radiotherapy is generally done with  $\gamma$ -rays emitted from:  
 (A) Iodine-131 (B) Strontium-90 (C) Sodium-24 (D) Cobalt-60
  13. Charge on the Droplet can be calculated by:  
 (A)  $q = \frac{mg}{vd}$  (B)  $q = \frac{v}{mgd}$  (C)  $q = \frac{mgd}{v}$  (D)  $q = \frac{d}{mgd}$
  14. If the distance between two charges is halved, Force becomes:  
 (A) One fourth (B) Four times (C) Half (D) Double
  15. The minimum power is delivered to across the resistor *R*, when:  
 (A)  $r = \infty$  (B)  $r = 0$  (C)  $r = R$  (D)  $r = R/4$
  16. A positive charge is moving away from observer. Direction of magnetic induction will be:  
 (A) Anticlockwise (B) Towards right (C) Towards left (D) Clockwise
  17. Shunt resistance is:  
 (A) Low resistance (B) High resistance (C) Zero resistance (D) Impedance