

Roll No. _____ to be filled in by the candidate

(For All Sessions)

Physics (Objective) Pwp-12-1-23 (Group-I)

Time: 20 Minutes Marks : 17

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. Which 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.

- 1.1. The basic circuit element in a D.C circuit is:

(A) Capacitor	(B) Inductor	(C) Battery	(D) Resistor
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2. The critical temperature of mercury is:

(A) 4.2 k	(B) 1.18 k	(C) 3.72 k	(D) 7.2 k
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3. The open loop gain of op-amplifier is of the order of:

(A) 10^2	(B) 10^3	(C) 10^5	(D) 10^4
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4. $X = A + B$ is the mathematical notation for:

(A) AND gate	(B) OR gate	(C) NOR gate	(D) NAND gate
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5. The momentum of a moving photon is:

(A) $P = h / \lambda$	(B) $P = \lambda / h$	(C) $P = hf$	(D) $P = mc^2$
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6. Pair production can take place by using:

(A) X-rays	(B) α -rays	(C) β -rays	(D) γ -rays
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7. The value of Rydberg's constant is:

(A) $1.0974 \times 10^7 m^{-1}$	(B) $1.0974 \times 10^{-7} m^{-1}$	(C) $1.0974 \times 10^{-7} m$	(D) $1.0974 \times 10^7 m$
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8. Half life of uranium -238 is:

(A) 4.5×10^{12} years	(B) 4.5×10^{11} years	(C) 4.5×10^{10} years	(D) 4.5×10^9 years
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9. The potential difference between anode and cathode in a neon bromine filled G.M counter is:

(A) 200 v	(B) 300 v	(C) 400 v	(D) 220 v
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10. The number of electron in one coulomb charge is:

(A) 6.2×10^{18}	(B) 1.6×10^{-19}	(C) 6.2×10^{21}	(D) 1.6×10^{-27}
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11. The S-I unit of electric flux is:

(A) Nmc^{-1}	(B) Nm^2c^{-1}	(C) Nm^2c	(D) $Nm^{-2}c^{-1}$
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12. A rheostat can be used as:

(A) Transformer	(B) Amplifier	(C) Oscillator	(D) Potential divider
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13. Lorentz force is known as:

(A) $\vec{F} = I(\vec{L} \times \vec{B})$	(B) $\vec{F} = q(\vec{v} \times \vec{B})$	(C) $\vec{F} = q\vec{E} + q(\vec{v} \times \vec{B})$	(D) $\vec{F} = q\vec{E}$
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14. DMM stands for:

(A) Digital millimeter	(B) Digital multimeter	(C) Digital measuring meter	(D) Digital ammeter
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15. When the back emf in a circuit is zero it draws:

(A) Zero current	(B) Steady average current	(C) Minimum current	(D) Maximum current
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16. The principle of AC generator is based on:

(A) Mutual induction	(B) Self induction	(C) Electromagnetic induction	(D) All of these
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17. The graph between A.C voltage with time is:

(A) Cosine curve	(B) Tangent curve	(C) Sine curve	(D) Cot curve
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