

Roll No. of Candidate : \_\_\_\_\_

**PHYSICS**

(Intermediate Part-II, Class 12<sup>th</sup>) 422 - (II) Paper II (Group - II)

Time: 20 Minutes

**OBJECTIVE** ..... Code: 8474 *Cut-4-22* Marks: 17

**Note:** You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank.

1. Which of the following electromagnetic waves have the shortest wavelength?  
(A) radio waves (B) infrared waves (C) ultraviolet waves (D) micro waves
2. Automatic function of street lights can be done by \_\_\_\_\_.  
(A) inductor (B) comparator (C) transistor (D) capacitor
3. A two input NAND gate with input 'A' and 'B' has output zero if \_\_\_\_\_.  
(A) B is zero (B) A is zero  
(C) both A and B inputs are zero (D) both inputs A and B are one
4. The shortest wavelength in Lyman series is \_\_\_\_\_.  
(A)  $\frac{2}{3}R_H$  (B)  $\frac{4}{9}R_H$  (C)  $\frac{1}{R_H}$  (D)  $R_H$
5. The potential difference between two plates is 100 volts and separation of the plates 5 cm then potential gradient is \_\_\_\_\_.  
(A)  $2000 \text{ NC}^{-1}$  (B)  $20 \text{ NC}^{-1}$  (C)  $5000 \text{ NC}^{-1}$  (D)  $2 \text{ NC}^{-1}$
6. If the temperature of the black body is doubled then energy radiated per second per unit area becomes.  
(A) 32 times (B) 16 times (C) 64 times (D) 4 times
7. In radiation therapy, the thyroid cancer treatment is done with \_\_\_\_\_.  
(A) sodium - 24 (B) iodine - 131 (C) carbon - 14 (D) cobalt - 60
8. A direct current of 5 ampere is given to primary coil, then the voltage developed across secondary coil is \_\_\_\_\_.  
(A) 5 volts (B) zero (C) 10 volts (D) 2 volts
9. A battery moves a charge of 400 C in a circuit in time 50 seconds. The current will be \_\_\_\_\_.  
(A) 2 A (B) 8 A (C) 20 A (D) 200 A
10. Which of the following is not needed in fast nuclear reactor?  
(A) moderator (B) control rods (C) turbine (D) heat exchanger
11. Which of the following is not present in A.C generator?  
(A) split rings (B) carbon brushes (C) magnetic field (D) armature
12. Which of the following is not accurate measuring device?  
(A) digital multimeter (B) cathode rays oscilloscope (C) voltmeter (D) potentiometer
13. A one farad capacitor is charged to 100 V and then discharge through 1 K $\Omega$  resistance the total energy dissipated through resistor is \_\_\_\_\_.  
(A) 5 KJ (B) 10 KJ (C) 2 KJ (D) 100 KJ
14. The length contraction happens only \_\_\_\_\_.  
(A) perpendicular to direction of motion (B) along the direction of motion  
(C) opposite to direction of motion (D) along any direction
15. In RLC series circuit, at resonance frequency, the impedance is \_\_\_\_\_.  
(A) zero (B) minimum (C) maximum (D) infinite
16. Which one of the following is not semiconductor?  
(A) germanium (B) silicon (C) aluminium (D) gallium arsenide
17. The magnetic force on an electron moving with speed  $10^6 \text{ m/sec}$  perpendicular to the magnetic field of strength 1 web  $\text{m}^{-2}$  is \_\_\_\_\_.  
(A)  $1.6 \times 10^{-19} \text{ N}$  (B)  $1.6 \times 10^{-13} \text{ N}$  (C) zero (D)  $1.6 \times 10^{-23} \text{ N}$