

**" VIJAYASREE " - PALAKKAD**  
**' Second Midterm Assessment November 2018 '**

Std X

**PHYSICS**

Time 1 Hr / Score: 20

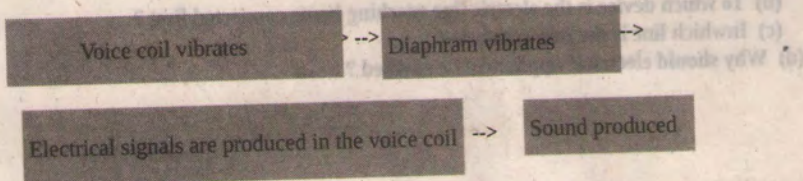
( SECTION A Questions from 1 to 3 1 Mark,  
 SECTION B Questions from 4 to 6 2 Marks,  
 SECTION C Questions from 7 to 9 3 Marks,  
 SECTION D Questions from 10 to 12 4 Marks,  
 from each SECTION only 2 questions should select )

SECTION A

1. A device is marked as 230 V, 100 W. This indicates .....of that device ?
2. What is the frequency of AC distributed in our country ?
3. Electricity is produced at Kayamkulam power station by igniting fuels. Complete the energy change taking place there  
 .....--> Heat energy --> Mechanical Energy--> Electrical Energy

SECTION B

4. Classify the statements as filament lamps and LED lamps
  - \* Needs less power
  - \* Low melting point
  - \* Emits white light in red hot condition
  - \* Not harmful to the environment
5. In connection with the working of a microphone, a few statements are given in boxes. Arrange them in the proper order.



6. Why is the earth pin differ from other pins in a three pin plug ?

SECTION C

7. Safety fuse is a device which protect us from danger when excess current flows through it
  - (a) What are the precautions to be taken while connecting it in a circuit ?
  - (b) What are measures to betaken while selecting fuse wire ? 8. അനുയോജ്യമായ വിധത്തിൽ
8. Match the following Colomns ( A,B,C )

	A	B	C
I	Number of turns in secondary is ten times more than primary	$V_p=1000\text{ V}$	$I_s=25\text{ A}$
II	Number of turns in secondary is half of the turns in primary	$I_p=5\text{ A}$	$V_s=100\text{ V}$
III	Number of turns in secondary is less than five times in primary	$V_p=10\text{ V}$	$V_s=500\text{ V}$

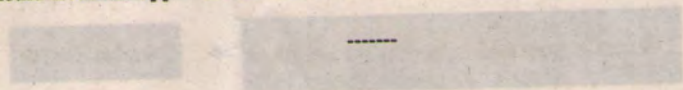
9. Star connection is wrongly depicted in the following figure



- (a) Redraw the correct figure ?
- (b) What is the potential difference between the neutral line and the earth?

**SECTION D**

- 10. A bulb is designed to work in 230 V. The resistance of the filament is 529  $\Omega$ . If the bulb works at 115 V, what will be its power?
- 11. The switch is kept ON in the given circuit
  - (a) Does the bulb glow ?
  - (b) Does the magnetic field induced in the primary coil in this situation ?
  - (c) What is to be done to develop magnetic flux change in the primary coil ?
  - (d) What is your observation if you turn the switch OFF
- 12.
  - (a) How are the house hold devices connected?
  - (b) To which device is the electric line reaching home connected first ?
  - (c) In which line is the fuse connected ?
  - (d) Why should electrical appliances be earthed ?



7. Safety fuse is a device which protect us from danger when excess current flows through it.  
 (a) What are the precautions to be taken while connecting it in a circuit ?  
 (b) What are necessary to be taken while selecting fuse wire for connection of circuit.

8. Match the following Columns (A, B, C)

	A	B	C
I	Number of turns in secondary is less than more than primary	$V_p = 100V$ $V_s = 25V$	$V_p = 25V$
II	Number of turns in secondary is half of the primary	$V_p = 100V$	$V_s = 100V$
III	Number of turns in secondary is two times the primary	$V_p = 10V$ $V_s = 20V$	$V_p = 20V$

9. Star connection is usually preferred in the following cases