

Sl. No.

SSLC MODEL EXAMINATION, FEBRUARY - 2018.**PHYSICS**

(English)

Time : 1½ Hours

Total Score : 40

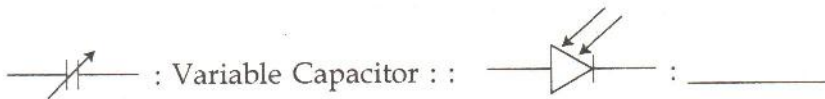
Instructions :

- First 15 minutes are allotted as Cool off time.
- Answer the questions only after reading instructions and questions thoroughly.
- Questions are given in A, B, C, D sections write any 4 questions from each section.
- Scores allotted for sections A, B, C, D are 1, 2, 3 and 4 respectively.

Score

SECTION - A

1. Which type of waves are used in Wi-Fi for connecting different devices ?
2. Give the frequency of electric current distributed in our country.
3. Which radiation is used in night vision camera ?
4. Which of the following property of sound is used in the working of a stethoscope ?
(Resonance; echo; Multiple reflection; Forced vibration)
5. Fill up the blanks after observing the given relation.

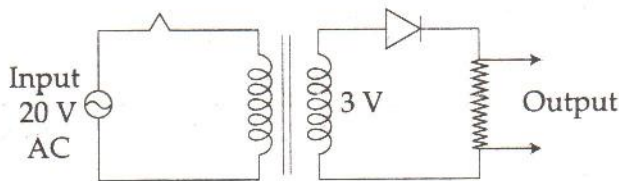
**SECTION - B**

6. The earth pin of a three pin plug is constructed with some special features. Why ?
7. Which part of a power generator is 'functioning as a stator ? Give the advantages of using this part as the stator.
8. Give the functions of an electronic ballast used in modern Fluorescent Lamp.
9. Write any four methods used in the construction of big halls to increase the clarity of sound.
10. What is known as Brown energy ?

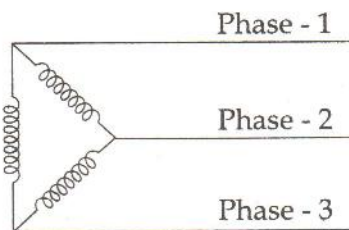
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SECTION - C

11. (a) What do you mean by biomass ?
 (b) Throwing Biomass carelessly can cause atmospheric pollution. Explain why ?
 (c) State how the biomass in a biogas plant is converted into biogas.
12. (a) Write an instance in which Tyndal effect is observed.
 (b) Explain how Tyndal effect is produced.
13. Refer the figure given below.



- (a) Represent graphically the input and output voltage.
 (b) Name the process taking place in the above circuit.
14. (a) Write the names of the gases that causes global warming.
 (b) Give the steps to be adopted for reducing global warming.
15. Star connection is wrongly depicted in the following figure.

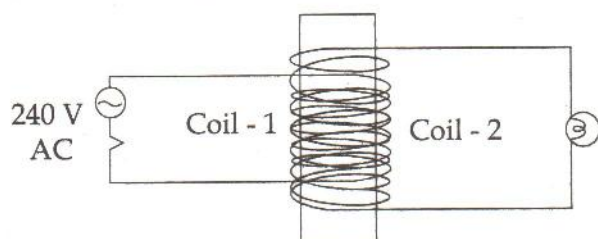


- (a) Redraw the correct figure.
 (b) What is the potential difference between the neutral line and the earth ?

SECTION - D

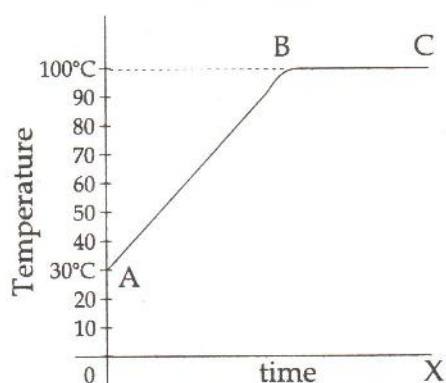
16. (a) Describe an experiment to show the scattering of white light.
 Give the details of :
 • apparatus required
 • procedure
 • observations
 (b) Based on this experiment explain why the atmosphere of moon appears dark.

17. An arrangement of two solenoids over a soft iron core kept without contacting each other is given below. Observe the figure.

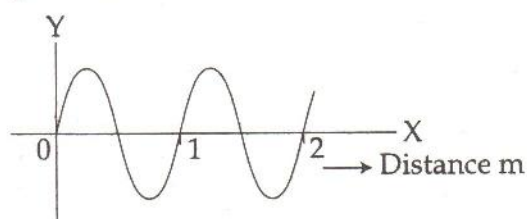


Based on this figure answer the following questions.

- Name the process in which current is produced in the second coil, when the circuit is switched on.
 - What are the factors affecting the induced e.m.f. ?
 - Can we get continuous light from the bulb when the AC source is replaced by a DC source - why ?
18. The time-temperature graph of a liquid heated in a vessel is shown below. Answer the following based on this graph.

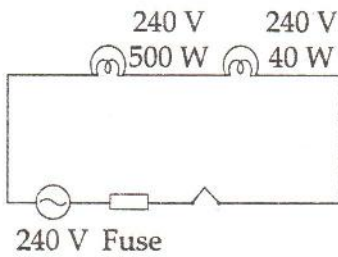


- Give the boiling point of the liquid.
 - For which process the heat supplied to the liquid from B to C is used.
 - Name the vapourisation process that takes place only at the boiling point of a liquid.
 - What do you mean by latent heat of vapourisation ?
19. The graph of sound wave propagation is given below. Analyse the graph and answer the questions.



- Name the physical quantity whose amplitude is represented on the Y - axis.
- If the frequency of the wave is 300 Hz, calculate the speed of the wave.
- Explain how sound is propagated through air.

20. Go through the circuit given below :



- (a) Which lamp will be brighter when the circuit is switched on? Justify your answer.
(b) What will be the amperage of the fuse in the circuit?

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