

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI-600 086**  
**(For candidates admitted during the academic year 2019-2020 & thereafter)**

**SUBJECT CODE : 19PH/PE/ED23**  
**M.A./M.Sc./M.Com. DEGREE EXAMINATION - APRIL 2023**  
**PHYSICS**  
**SECOND SEMESTER**

**COURSE : ELECTIVE**  
**PAPER : EVERYDAY PHYSICS**  
**TIME : 3 HOURS**

**MAX. MARKS : 100**

**SECTION – A**

**ANSWER ALL THE QUESTIONS:**

**(10 x 3 = 30)**

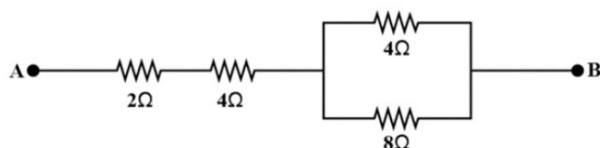
1. What do you understand by simple harmonic motion?
2. Define torque and give its unit.
3. Give the principle of laser.
4. What is the main difference between microscope and telescope?
5. State Ohm's law
6. List out some examples of conducting material and insulating material.
7. Where do you find Echo? Why?
8. What is resonance? Provide an example for resonance in daily life.
9. Define magnetic field.
10. How do you make a magnet?

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS:**

**(5 x 5 = 25)**

11. Distinguish between centripetal and centrifugal forces.
12. Write a note on polarization.
13. What is basis of Lenz law of electromagnetic induction? Give two applications.
14. A sound travels in both air and iron medium, in which medium it travels fast? Justify your answer.
15. State different properties of magnetic materials.
16. Find the equivalent resistance of the circuit.



17. Determine the energy of a photon of an electromagnetic spectrum, given that the wavelength of spectrum,  $\lambda = 30 \times 10^{-8}$  m. where  $h = 6.6 \times 10^{-34}$  J s;  $c = 3 \times 10^8$  m/s.

**SECTION – C**

**ANSWER ANY THREE QUESTIONS:**

**(3 x 15 = 45)**

18. State and explain Newton's law of motion with an example.
19. Discuss various phenomena like reflection, refraction and Interference of light.
20. Explain Direct current and alternating current with suitable diagram.
21. Elaborate the various factors affecting acoustics of auditorium.
22. Describe different types of magnetism with examples.

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