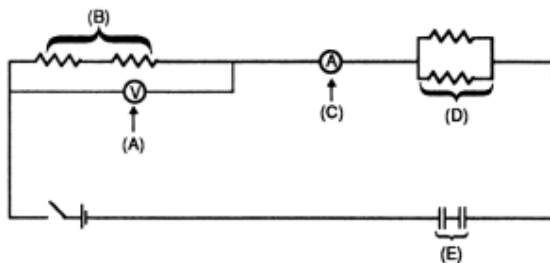


## SAT Physics Practice - Paper 42

Questions 1–3 relate to the following thermal properties of matter:

- (A) Specific heat
  - (B) Heat conduction
  - (C) Convection
  - (D) Heat capacity
  - (E) Radiation
1. Which property involves the transfer of energy by electromagnetic waves?
  2. Which term describes the transfer of heat by successive molecular collisions?
  3. Which term represents the ratio of the amount of heat added to a body to the temperature change of the body?

Questions 4–5 relate to the various elements illustrated in the following schematic of an electrical circuit:

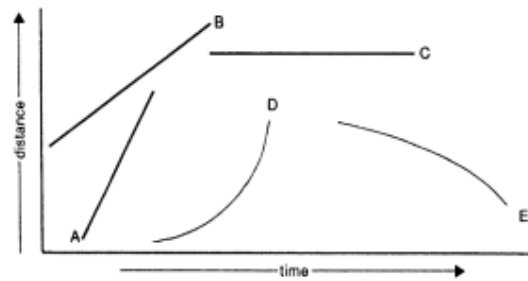


4. Which lettered choice represents resistors in series?
5. Which component measures current?
  - (A) Period
  - (B) Frequency
  - (C) Amplitude
  - (D) Velocity
  - (E) Acceleration

Questions 6–8 refer to an object that is undergoing simple harmonic motion. Assume dissipative forces are negligible.

6. Which term describes the maximal displacement of the object from its equilibrium position?
7. Which property of the object's motion is equal to the time necessary for the object to complete one oscillation?
8. Which property is equal to zero when the displacement of the object equals zero?

Questions 9–11 refer to the movements of five objects. The distance each object travels over a given period of time is shown in the diagram below:



9. Which object has not moved during the charted time period?
10. Which object has the greatest constant velocity?
11. Which object experiences the greatest acceleration?

Questions 12–13 relate to physical and chemical properties of an atom:

- (A) Atomic number
  - (B) Mass number
  - (C) Alpha particle
  - (D) Isotope
  - (E) Beta particle
12. Which term represents the number of particles contained within the nucleus?
13. Which property of an atom best defines its chemical characteristics?

Questions 14–15 relate to properties of geometrical and physical optics:

- (A) Diffraction
  - (B) Refraction
  - (C) Polarization
  - (D) Reflection
  - (E) Aberration
14. Which property refers to the altering of transverse waves so that vibrations are limited to one plane perpendicular to the direction of propagation?
15. Which term describes the bending of light rays as the light passes from one medium to another?

1. E 2. B 3. D 4. B 5. C 6. C 7. A 8. E 9. C 10. A 11. D 12. B 13. A 14. C 15. B