

SEETA HIGH Physics Seminar Paper - Answers (Items 16-20)

Item 16: Water Tank Installation

- (a)(i) Height = 1 m; (ii) Steps = 3.
- (b) Pipes need flexible, durable materials; fitted sloped down.

Item 17: Bumpy Road Journey and Hooke's Law

- (a) Car lacks proper suspension.
- (c) Elastic materials follow Hooke's Law.
- (d) Speed = 80 km/h; (e) Leave 15 mins early.

Item 18: Restaurant Business and Water States

- (a) Radiator uses fins, water for cooling.
- (b) States: solid (ice), liquid (water), gas (steam).
- (d) Specific heat of drink 2688 J/kgK.

Item 19: Thermometer Making

- (a) Liquid must expand uniformly; calibrate with known points.
- (b) Use moments principle to determine density.

Item 20: Milk Business and Fridge Cooling

- (a) Use mass/volume to test purity.
- (b) Energy removed 4396 J.
- (c) Fridge maintains safe temperature, slows bacteria.