

## GSP-1010 Final Exam Equation Sheet

You may use this sheet and the First Exam Equation Sheet during the Final Exam

$$v = \sqrt{F/\rho}$$

$$v = (\text{m/s}) \quad F = (\text{N}), \quad \rho \text{ is defined below}$$

$$\rho = \text{m/l}$$

$$\rho = (\text{kg/m})$$

$$v = 20.1 \sqrt{T}$$

$$v = (\text{m/s}) \quad T = (\text{K}), \quad T(\text{K}) = T^\circ\text{C} + 273$$

$$v = f \lambda$$

$$f = (\text{Hz}) \quad \lambda = (\text{m/cycle})$$


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$$F = (9 \times 10^9) q_1 q_2 / (d^2)$$

$$q = (\text{C}), \quad d = (\text{m})$$

$$V = \text{Work}/q$$

$$V = (\text{V}) = (\text{J/C})$$

$$V = \text{Energy}/q$$

$$\text{Electric Field} = F/q$$

$$\text{Electric Field} = (\text{V/m}) \text{ or } (\text{N/C})$$


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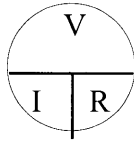
$$I = q/t$$

$$q = (\text{C}) \quad t = (\text{s}) \quad I = (\text{A}), \quad 1\text{A} = 1\text{C}/1\text{s}$$

$$1\text{C} = \text{charge on } 6.24 \times 10^{18} \text{ (+) protons}$$

$$\text{or } 6.24 \times 10^{18} \text{ (-) electrons}$$

$$R = V/I$$

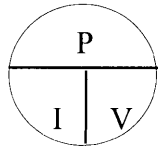


$$R = (\Omega) = (\text{V/A})$$

$$P = \text{Energy}/t$$

$$P = (\text{J/s}) = (\text{W})$$

$$P = I * V \text{ or } I^2 * R \text{ or } V^2 / R$$



$$P = (\text{W}), (\text{kW})$$

$$C = \text{Rate} * \text{Number}(\text{energy units})$$

$$C = (\$), \text{Rate } (\$/\text{kWh}), \text{Number}(\text{kWh})$$

$$V_o / V_i = N_o / N_i$$

$$N = (\text{turns}), \quad V = (\text{V})$$


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$$v = f * \lambda = c \text{ (electromagnetic waves in space)} \quad c = 3 \times 10^8 \text{ m/s}$$

$$P \propto T^4$$

$$P = (\text{W}), \quad T = (\text{K})$$

$$\lambda_{\text{MAX}} = 0.0029/T$$

$$\lambda_{\text{MAX}} = (\text{m}), \quad T = (\text{K})$$