EKSAMENINLIGTINGSBLAD VIR DIE FISIESE WETENSKAPPE
(FISIKA)

TABEL 1   FISIESE KONSTANTES

NAAM	SIMBOOL	WAARDE
Versnelling as gevolg van gravitasie	g	$9{,}8$ m·s^{-2}
Spoed van lig in 'n vakuum	c	$3{,}0 \times 10^{8}$ m·s^{-1}
Universele gravitasiekonstante	G	$6{,}7 \times 10^{-11}$ N·m^2·kg^{-2}
Coulomb se konstante	k	$9{,}0 \times 10^{9}$ N·m^2·C^{-2}
Grootte van lading op 'n elektron	e	$1{,}6 \times 10^{-19}$ C
Massa van 'n elektron	m_e	$9{,}1 \times 10^{-31}$ kg
Planck se konstante	h	$6{,}6 \times 10^{-34}$ J.s
1 elektron volt	eV	$1{,}6 \times 10^{-19}$ J

TABEL 2   FISIKA FORMULES

BEWEGING

$v = u + at$ **of** $v_f = v_i + a\Delta t$	$s = \left(\dfrac{v + u}{2}\right)t$ **of** $\Delta x = \left(\dfrac{v_f + v_i}{2}\right)\Delta t$
$v^2 = u^2 + 2as$ **of** $v_f^{\,2} = v_i^{\,2} + 2a\Delta x$	$s = ut + \frac{1}{2}at^2$ **of** $\Delta x = v_i\Delta t + \frac{1}{2}a(\Delta t)^2$

KRAG EN MOMENTUM

$F_{net} = ma$	$F_{net} = \dfrac{\Delta p}{\Delta t}$ **of** $F_{net}\Delta t = m\Delta v$	$J = \Delta p = mv - mu$ **of** $J = \Delta p = mv_f - mv_i$
$p = mv$	$F_g = mg$	$F_{fs}^{maks} = \mu F_N$ $F_{fk} = \mu_k F_N$

WERK, ENERGIE EN DRYWING

$W = Fs$ **of** $W = F\Delta x$ **of** $W = F\Delta x \cos\theta$	$P = \dfrac{W}{t}$	$P = Fv$

$E_p = mgh$	$E_k = \dfrac{1}{2}mv^2$	$W_{net} = \Delta E_K$	effektiwiteit $= \dfrac{\text{drywing}_{uit}}{\text{drywing}_{in}} \times 100$

GRAVITASIE- EN ELEKTRIESE VELDE

$F = G\dfrac{m_1 m_2}{r^2}$	$g = \dfrac{F}{m}$	$g = G\dfrac{M}{r^2}$
$F = k\dfrac{q_1 q_2}{r^2}$	$E = \dfrac{F}{q}$	$E = \dfrac{kQ}{r^2}$

ELEKTRONIESE STROOMBANE

$I = \dfrac{q}{t}$	$V = \dfrac{W}{q}$
$R = \dfrac{V}{I}$	$emk = I(R_{eks} + r)$ **of** $emk = V_{lading} + V_{interne\ weerstand}$
$R_S = R_1 + R_2 + ...$	$\dfrac{1}{R_p} = \dfrac{1}{R_1} + \dfrac{1}{R_2} + ...$

$P = \dfrac{W}{t}$ **of** $W = Pt$
$W = VIt$ **of** $W = I^2 Rt$ **of** $W = \dfrac{V^2}{R}t$
$P = VI$ **of** $P = I^2 R$ **of** $P = \dfrac{V^2}{R}$

ELEKTRODINAMIKA

$\Phi = BA\cos\theta$	$emk = -\dfrac{N\Delta\Phi}{\Delta t}$	$F = IB\ell \sin\theta$
$V_p I_p = V_s I_s$		$\dfrac{N_s}{N_p} = \dfrac{V_s}{V_p}$

FOTONE EN ELEKTRONE

$c = f\lambda$	$E = hf$ **of** $E = \dfrac{hc}{\lambda}$
$E = W_0 + E_{K(maks)}$	$W_0 = hf_0$ ／ $E_{K(maks)} = \dfrac{1}{2}mv_{maks}^2$