Physics GCSE/IGCSE Formula Sheet

1) $F = ma$
2) $a = (v-u)/t$
3) $F = ke$
4) $w = mg$
5) $W = Fd$
6) $E = Pt$
7) $P = W/t$
8) $GPE = mgh$
9) $KE = ½ mv^2$
10) $P = VI$
11) $E = VIt$
12) $Q = It$
13) $E = VQ$
14) $E = IRQ$
15) $E = I^2Rt$
16) Momentum (p) = mv
17) $F = \Delta p/t$ $F = (mv-mu)/t$
18) Impulse (J) = Δp
19) $F = J/t$ or $J = Ft$
20) $V = IR$
21) $V = E/Q$ or $V = W/Q$
22) $P = I^2R$
23) $P = V^2/R$
24) $d = s \times t$
25) $v = u + at$
26) $s = ut + 1/2at^2$ or $s = 1/2t (v + u)$
27) $v^2 = u^2 + 2as$
28) $s = vt – 1/2at^2$
29) $d = m/v$
30) $P = F/A$
31) Wave speed = frequency x wavelength
32) $V_p/V_s = N_p/N_s$
33) $E = hv$ or $E = hf$ (h = Planck's constant = 6.626×10^{-34} Js)
34) $E = mc^2$

Units of Quantities

1) Force = Newton (N)
2) Energy = Joules (J)
3) Work done = Joules
4) Power = Watt (W)
5) Momentum = kgm/s
6) Weight = N
7) Velocity = m/s

8) Resistance = ohm (Ω)
9) Voltage or potential difference (pd) = Volts (V)
10) Current (I) = Amperes (A)
11) Charge (Q) = Coulombs (C)
12) Acceleration = m/s^2
13) Impulse (J) = Ns or kgm/s
14) Time = s
15) Pressure = N/m^2 or Pa
16) Frequency = Hz or s^{-1}
17) Wavelength = m
18) Wave speed = m/s