IB Physics SL Y1– Spring 2015 – Final Exam Review

Final Exam Date:
1B: Thursday, May 21, 2015
3A: Friday, May 22, 2015

Final Exam Review Schedule:

1B	**3A**
Day 1: Friday, May 15, 2015	Day 1: Thursday, May 14, 2015
Day 2: Tuesday, May 19, 2015	Day 2: Monday, May 18, 2015

Tutorial: Sunday, May 17, 2015 from 11:00 am to 1:00 pm at the Howell Mill Starbucks

Final Exam Topics:
Applications of Newton's Laws
   Force(Types, FBD)
   Newton's First Law (Inertia, Equilibrium)
   Newton's Second Law (Net force = ma)
   Inclined planes
   Newton's Third Law
Momentum and Impulse
   Momentum
   Impulse (Change in momentum)
   Conservation of momentum
Work, Power, and Energy
   Work
   Kinetic and Potential Energy
   Mechanical Energy
   Power

Final Exam Structure:
Section I – Multiple Choice (15 problems)
Section II – Free Response (3 problems)

Sub-topic 2.1 – Motion	Sub-topic 2.2 – Forces
$v = u + at$ $s = ut + \frac{1}{2}at^2$ $v^2 = u^2 + 2as$ $s = \dfrac{(v + u)t}{2}$	$F = ma$ $F_f \leq \mu_s R$ $F_f = \mu_d R$
Sub-topic 2.3 – Work, energy and power	Sub-topic 2.4 – Momentum and impulse
$W = Fs\cos\theta$ $E_K = \frac{1}{2}mv^2$ $E_P = \frac{1}{2}k\Delta x^2$ $\Delta E_P = mg\Delta h$ $\text{power} = Fv$ $\text{Efficiency} = \dfrac{\text{useful work out}}{\text{total work in}}$ $= \dfrac{\text{useful power out}}{\text{total power in}}$	$p = mv$ $F = \dfrac{\Delta p}{\Delta t}$ $E_K = \dfrac{p^2}{2m}$ $\text{Impulse} = F\Delta t = \Delta p$