2017 Sec 3 Physics Mid-Year Examination (SA1)

Topics & Guidelines for Revision

Name: …… **( ) Class: 3/** …… **Date:** ……

Plan for revising all topics

- **2017 Sec 3 Topics**

			T2 Week	Mar Break	1	2	3	4	5	6	Remarks
Topical Notes		**Practicals**	**Assignments**								
1	**Physical Quantities & Measurements** (including graphical skills)	PR1 Measurement	AS 1: Physical quantities & measurements								
		PR2 Simple pendulum									
2	**Kinematics**	PR3 Kinematics Project	AS 2.1: Speed, velocity & acceleration								
			AS 2.2: s-t & v-t graphs								
			AS 2.3: Equations of motion								
3	**Dynamics**	PR4 Forces in equilibrium	AS 3.1: Types of forces & free-body diagrams								
			AS 3.2: Newton's 1st law								
			AS 3.3: Newton's 2nd & 3rd laws								
			AS 3.4: Vector addition								

Note: Dynamics: **Vector resolution** is <u>not included</u> in this mid-year examination.

Advice for exam preparation:

- Plan (by date or week) and start your revision early so that you have sufficient time to
  - cover all topics thoroughly (notes & assignments),
  - have a quick review of past assessments (quizzes, block tests, etc.) and
  - practise questions from previous years' EOY papers and your ten-year-series.
- Track your progress using "✓" (planned) and "X" (revised) against each item.
- Be prepared to handle questions for all **Specific Instructional Objectives** (on first page of topical notes).
- Refer to textbook "All about Physics" for detailed explanations, worked examples and additional practice questions (at the end of each topic).

Schedule & Format for Physics Paper

	Date	Time	Marks	Structure	Remarks
1	**11 May 2017**	*0845 hrs to 1015 hrs*	20	**Section A** • 20 MCQ	**Shade** all answers on Optical Answer Sheet (OAS) using 2B pencil
			30	**Section B** • short structured questions	Answer all questions in the spaces provided
			10	**Section C** • 1 free response question	Compulsory
	1 h 30 min		***60***		

Note: *Actual date and time to be confirmed when the mid-year exam schedule is released!*

General Advice

- Ensure that you bring a **calculator** in good working order, a **protractor**, **30 cm semi-transparent ruler** and other mathematical instruments.
- Have sufficient sleep/rest the day before the paper.
- Ensure you have a spare pen, pencil and eraser.
- **Do not bring** any correction fluid/tape into the examination venue.

Problem Solving Strategy in Physics: I SEE*

**Adapted from University Physics (with Modern Physics) by Young and Freedman, 2008 (12th Edn).*

IDENTIFY the relevant concepts
Try to **understand** the physics of the problem before choosing the approach or launching into any mathematical analysis
1. identify the required variable(s)
2. recall related physical laws/principles, formulae and equations
3. recall similar systems in related topics

SET UP the problem
1. Sketch a **diagram** if it helps (it nearly always does).
2. Choose the **equations** or **formulae** you'll use to solve the problem and decide how you'll use them.
3. Try to keep expressions algebraic (using **suitable symbols**) rather than numerical.

EXECUTE the solution
1. List known and unknown **quantities**.
2. Solve the equations for the unknowns.
3. Show your **working** neatly and clearly on the page, and explain what you are doing and why you are doing it.

EVALUATE the answer
1. Check the **units** of your answer.
2. Generally, **use 2 or 3 significant figures** in your **final** numerical answer (keep more s.f.s for intermediate steps).
3. Check the **magnitude** of your answer against common sense or other knowledge.