

Test Blueprint for the Second Long Exam in NASC 3		
October __, 2015		
The test items will be based on the following learning outcomes and level of instructional objectives (KNOWLEDGE, COMPREHENSION, APPLICATION)		
	Instructional Objectives	K C
1	show how the impulse-change in momentum equation was obtained	1
2	explain some challenging /thought provoking demonstrations involving the impulse-change in momentum equation	1
3	show the relationship between F_{net} and Δt for a given change in momentum	2
4	describe the following concepts →impulse	1
	→momentum	1
5	explain happenings based on the law of conservation of linear momentum → propulsion	1
	→collisions	1
6	explain the law of conservation of mechanical energy	1
7	describe concepts relevant to the law of mechanical energy conservation →work	1
	→kinetic energy	1
	→gravitational potential energy	1
	→conservative/non-conservative forces	1
8	solve simple problem on conservation of mechanical energy	
9	explain the relationships among the variables involved in the concept of power	1
10	to define key terms in the study of fluids (verbally and in terms of equations) → density → streamlines	2
	→ relative density → laminar flow	
	→ pressure → turbulent flow	
	→ buoyant force → efflux	
11	to explain the relationships (proportionalities) among the concepts in the definition of these key terms → density (example: relationships among mass, volume at density)	2
	→ relative density	
	→ pressure	
	→ buoyant force	
12	to explain the essential ideas contained in these important principles and equations → Pascal's Principle	4
	→ Archimedes' Principle (bouyancy)	
	→ Continuity Equation	
	→ Bernoulli's Equation (general)	
	■ Bernoulli's Principle	
13	to give the fundamental bases for the Continuity Equation and Bernoulli's Equation	1
14	to solve simple problems applying these concepts and principles in varied situations	
15	to explain some of the activities/phenomena experienced in the Super Extra Fluids Challenge	2
16	to relate the ideas learned about fluids in everyday experiences in life	
	Number of Items	5 20
	TOTAL NUMBER OF ITEMS = 30-34	
	Format: I. Modified True or False	
	II. Multiple Choice-items with * * need to have the solutions shown. No solution, no credit.	
	III. Simple Problem/Short answer	
	BRING ID, CALCULATOR and EXTRA PEN	