Topics / Cognitive Taxonomy		Cognitive Taxonomy Level 1 (i.e. KNOWLEDGE/ COMPREHENSION)		Cognitive Taxonomy Level 2 (i.e. COMPREHENSION/ APPLICATION)		Cognitive Taxonomy Level 3 (APPLICATION/ANALYSIS)		
		number of items	specific cognitive process	number of items	specific cognitive process	number of items	specific cognitive process	<u>Narrative</u>
Topic 2 (Properties of matter)	topic 2.1 (Types of matter)Elements vs. compounds, Properties of elements vs. compounds	0-1	Definition of element, compound	1-2	Identification of element, compound using molecular representations			The main purpose of this exam is to assess the student on applying the fundamental concepts of chemistry including 1. Types and states of matter 2. placement of elements on the periodic table 3. Naming and properties of ionic and covalent compounds The test will include 25 -30 questions which will include the difficulties mentioned in this blueprint.
	topic 2.2 (Mixtures)Homogene ous and heterogeneous	1-2	recognize the different types of mixtures	1-2	recognize the different types of mixtures using molecular representations			
Topic 3 (States of Matter)	topic3.1 (solids, liquids, and gases)	1-2	Identify the states of matter given a picture at the particulate level	1-2	Recognize the states of matter based on the given property.			
	topic 3.2 (Energy transfer)	1-2	Definition of heat, temperature	1-2	Given the phase change, identify the name of the process as melting, boiling, vaporizing etc.			
Topic 4 (Periodic table)	topic 4.1 (Electron configuration - Elements 1 -20) includes long and short form	1-2	Identify the electron configuration given the name and symbol of the element	2-3	Given the electron configuration, identify the element	2-3	Identify the number of valence electrons or the family name or group number given the elctron configuration of an element.	
	topic 4.1 (Long hand electron configurations for ions)	1-2	Identify the electron configuration given the name and/or symbol of the ion					
	topic 4.2 (Periodic Trends)			3-4	Arrange the elements in increasing/ decreasing order of ionization energy, atomic radius, or ionic radius			
Topic 5 (Chemical Bonding)	topic 5.1 (lonic Bonding) Nomenclature of binary ionic compounds, compounds with transition metal ions, compounds with polyatomic ions	3-4	naming ionic compounds or given the name idenfying the formula. Questions will include binary ionic compounds, compounds with transition metal and polyatomic ions. Polyatomic ions can only be nitrates, nitrites sulfates, sulfites, ammonium, phosphates, carbonates, hydroxides and halogen polyatomics chlorates, chlorites, perchlorates and hypochlorites.			1-2	given a formula, predict the formula for another compound with an element in the same group	
	topic 5.2 (Covalent Bonding) Nomenclature and Lewis dot symbols and structures	1-2	naming covalent compounds	1-2	Applying the concept of valence electrons to identify the correct Lewis structure. Questions will be identifying the number of lone pairs or unshared pairss of electrons on the central atom.	1-2	Applying the concept of valence electrons to identify the correct Lewis structure. Questions will include diatomic elements and compounds with the following combinations H,C,N,O,P,S and halogens	