Laboratory of Crystallography and Mineralogy

Lab No. 7

Wednesday

Instructor:

Eng. A. Abu Aladas

Silicates Minerals (I)

Student Name: ----------

Student No.: ----------

Mineral Name	Unit Composition	Mineral Group	Chemical Formula	Color	Luster	Streak	Hardness	Cleavage	Fracture	Specific Gravity	Transparency
Kayanite	$(SiO_4)^{4-}$	Nesosilicates (Orthosilicates)	Al_2SiO_5								
Andalusite			Al_2SiO_5								
Olivine			$(Mg, Fe)_2SiO_4$								
Epidote	$(Si_2O_7)^{6-}$	Sorosilicates (Disilicates)	$Ca_2(Al, F)Al_2O(SiO_4)^-(Si_2O_7)(OH)$								
Vesuvianite			$Ca_{10}(Al,Fe)_2Al_4(SiO_4)_5(Si_2O_7)_2(OH,F)_4$								
Diopside	$(Si_2O_6)^{4-}$	Inosilicates (Single Chain)	$CaMg(Si_2O_6)$								
Augite			$(Ca,Na)(Mg,Fe,Al,Ti)(Si,Al)_2O_6$								
Hornblende	$(Si_4O_{11})^{6-}$	Inosilicates (Double Chain)	$Ca_2(Mg,Fe,Al)_5(Al,Si)_8O_{22}(OH)_2$								
Actinolite			$Ca_2(Mg_{4.5-2.5}Fe^{2+}{}_{0.5-2.5})Si_8O_{22}(OH)_{22}$								