



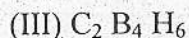
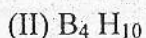
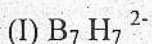
EASTERN UNIVERSITY, SRI LANKA
SECOND EXAMINATION IN SCIENCE 2005/2006
SECOND SEMESTER (March/April 2008)-REPEAT
CH 205 BORON CHEMISTRY AND SILICATES



Time allowed: **ONE Hour**

Answer all questions

1. (a) i) Classify the following boranes/carboranes into their structural groups. Give reasons for your classification.



ii) Sketch the predicted geometry of the above compounds.

iii) Discuss the nature of bonding in each case.

(55 Marks)

- (b) How the following transformations could be effected through organo-metallic intermediate(s)?



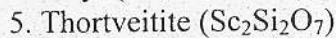
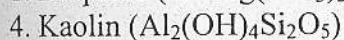
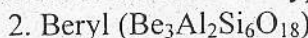
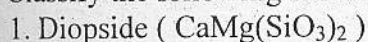
(45 Marks)

- 2) (a) Derive the possible "styx" number for B_5H_{11} and draw the most possible schematic diagram corresponding "styx" number.

(40 Marks)

- (b) i) List the structural types of silicates.

ii) Classify the following silicates into different structural types.



iii) Briefly describe the structure of Diopside.

(60 Marks)