4 Compiler Construction (tgg22)

Consider the following Context Free Grammar

$$S \rightarrow Aa \mid BAb$$

$$A \rightarrow BB \mid c$$

$$B \rightarrow Sd \mid e$$

where $\{a,\ b, c,\ d,\ e\}$ is the set of terminal symbols.

(a) Give a right-most derivation of *ecadeb*. [1 mark]

(b) Give a left-most derivation of *ecadeb*. [1 mark]

(c) Compute FIRST and FOLLOW for this grammar. Show your work. [6 marks]

(d) Is the grammar LL(1)? Justify your answer. [4 marks]

(e) Is the grammar SLR(1)? Justify your answer. [8 marks]