I. Define the following; [20]

a. prescriptive grammar
   The grammar rules written to be the official grammar of a language
   sometimes based on arbitrary or obsolete data.

b. recursion
   The repeated embedding of clauses or phrases.

c. universal
   A property found in all languages of the world.

d. constituent
   A set of nodes exhaustively dominated by a single node.

e. root node
   The only node that is not dominated in a sentence.

f. mother
   A is the mother of B if A immediately dominates B.

g. sister
   The set of nodes that are immediately dominated by the same node.

h. c-command
   A c-commands B if the first branching node that dominates A also
dominates B, and if neither A nor B dominates the other.

i. subject (structural definition)
   The NP that is immediately dominated by S.

j. terminal node
   A node which does not dominate anything. (The mother of nothing)
II. Determine the P-structure of the following sentence in the $X^0$ format: [30]

(1) The cynical student consumed a hot bowl of spicy cereal.

III. Structural Relations [20]

a. How is a head represented? Use two lexical heads as an example.
   $X^0: N^0, V^0, A^0, P^0$ (any two of these).

b. How is the lowest level of a phrase represented. Use two lexical phrases as an example.
   $X^1: N^1, V^1, A^1, P^1$ (any two of these).

c. How is a maximal projection indicated? Use two lexical phrases as an example.
   $XP: NP, VP, AP, PP$ (any two of these).

d. Write the rule that expands $V$ and its direct object.
   $V^0 (NP) \leftrightarrow V^1$

e. Write the rule that expands the above and any PP objects.
   $V^1 PP \leftrightarrow V^2$

IV. Name four structural relations that are logically transitive. [10]

   dominate, c-command, precede, sister, constituent of, symmetrical c-command,

V. In your tree above (1) draw ovals (circles) around each group of lexical sisters. [10]

VI. What are the three goals of a linguistic (actually any) theory? [10]

1) Observational Adequacy

   To account for all grammatical and ungrammatical sentences.

2) Descriptive Adequacy

   To find the best description.

3) Explanatory Adequacy

   To find an explanation or principle that can account for as many rules as
possible.