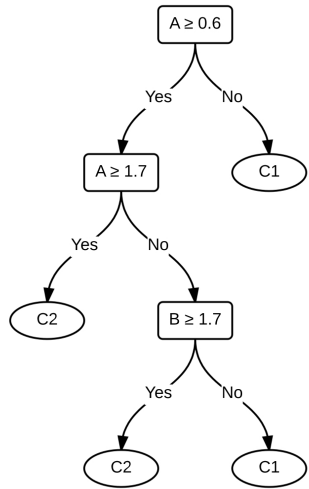2. (a) The second and fifth members are correctly classified, while the first, third, and fourth fail. The test accuracy is $\frac{2}{5} = 0.4$.

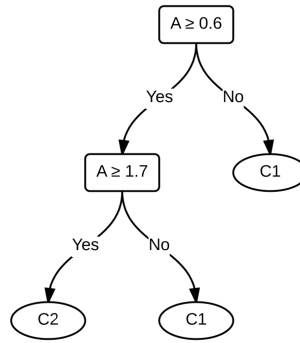(b)

Node pruned	Classifier raplacement	Classification accuracy
$A \geq 1.5$	C2	0.8
$B \geq 1.7$	C1	0.4
$A \geq 1.7$	C2	0.6
$A \geq 0.6$	C1	0.6

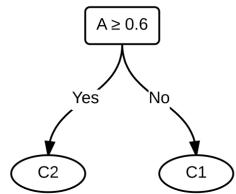$A \geq 1.5$ pruned $\qquad\qquad\qquad\qquad$ $B \geq 1.7$ pruned

$A \geq 1.7$ pruned $\qquad\qquad\qquad\qquad$ $A \geq 0.6$ pruned

(c) The last question node (which asks $A \geq 1.5$?) should be pruned–the accuracy on the tune set with this pruning is 0.8.

1