

MACHINE INTELLIGENCE AND EXPERT SYSTEMS

AUTUMN SEMESTER - 2021

ASSIGNMENT-1 (CONCEPT LEARNING)

Special Instructions: All the answers should be brief and to the point. All the parts of a question should be in one place. If you answer the same question multiple times and do not pen through them, only one of them will be considered for the correction and marking. Unfair answer scripts and unfair practices will be penalized.

Q1 . Apply Find-S algorithm on the given training set to find the maximally specific hypothesis. Consider the examples in the specified order and write down your hypothesis each time after observing an example.

Examples	Eyes	Nose	Head	Face-color	Hair	Smile(target)
1	round	triangle	round	purple	black	yes
2	square	square	square	green	black	no
3	square	triangle	round	yellow	black	yes
4	round	triangle	round	green	brown	no
5	square	square	round	yellow	black	yes

Q2 . For the given training dataset , determine all the consistent hypothesis using CANDIDATE ELIMINATION ALGORITHM.

Examples	Citations	Size	InLibrary	Price	Editions	Buy(target)
1	some	small	no	affordable	One	no
2	many	big	no	expensive	Many	yes
3	many	medium	no	expensive	Few	yes
4	many	small	no	affordable	many	yes