1- Which answer option is a correct statement about the following ASP program (in **Problem 1**)?

p
r ← ¬p, q

- (●) This ASP program has exactly 1 stable model.
- ( ) This ASP program is a non-definite program.
- ( ) This ASP program is NOT a positive program.
- ( ) This ASP program is unsatisfiable under propositional logic.

ASP :

```
p.

r :- not p, q.
```

Output from terminal

```
pm2_mcq1.txt:2:13-14: info: atom does not occur in any rule head:
  q

Solving...
Answer: 1
p
SATISFIABLE

Models       : 1
Calls        : 1
Time         : 0.004s (Solving: 0.00s 1st Model: 0.00s Unsat: 0.00s)
CPU Time     : 0.000s
```

2. Which answer option is a correct statement about the following ASP program (in **Problem 2**)?

p ← q
q ← ¬p

- (●) This ASP program is an unsatisfiable program.
- ( ) This ASP program has one stable model.
- ( ) This ASP program is a positive program.

This ASP program has no stable model but is satisfiable under propositional logic.

ASP :

p :- q.

q :- not p.

Output from terminal :

```
clingo version 5.6.2
Reading from pm2_mcq2.txt
Solving...
UNSATISFIABLE

Models       : 0
Calls        : 1
Time         : 0.001s (Solving: 0.00s 1st Model: 0.00s Unsat: 0.00s)
CPU Time     : 0.016s
PS C:\Users\ASUS\OneDrive\Desktop\ASU\ASU\CSE 579 - KRR>
```

3. Which answer option is a correct statement about the following ASP program (in **Problem 3**)?

p ← p
p V q

The critical part of the propositional rule in the ASP program is the “p” in the body of the first rule.

This ASP program has exactly 1 stable model and is satisfiable under propositional logic.

This ASP program has exactly 2 stable models.

This ASP program is a definite program.

ASP :
p :- p.
p, q :- #true.-