

# **CSE 103: DISCRETE MATHEMATICS**

---

**STUDENT ID: 1705072**

**CHAP NO: 01**

**SECTION NO: 01**

**EXERCISE NO: 42**

**VERIFICATION STD ID: 1705027**

**ASSIGNED TO: PROF. DR. M. KAYKOBAD**

**DATE ASSIGNED:**

**28-10-18**

**DATE SUBMITTED:**

**08-11-18**

**SUBMITTED BY:**

**SOUROV JAJODIA**

**STD ID: 1705072**

**SECTION: B**

### QUESTION:

What is the value of  $x$  after each of these statements is encountered in a computer program, if  $x = 1$  before the statement is reached?

- a) if  $x + 2 = 3$  then  $x := x + 1$
- b) if  $(x + 1 = 3)$  OR  $(2x + 2 = 3)$  then  $x := x + 1$
- c) if  $(2x + 3 = 5)$  AND  $(3x + 4 = 7)$  then  $x := x + 1$
- d) if  $(x + 1 = 2)$  XOR  $(x + 2 = 3)$  then  $x := x + 1$
- e) if  $x < 2$  then  $x := x + 1$

### ANSWER:

- a) 2
- b) 1
- c) 2
- d) 1
- e) 2

If the hypothesis is true, then the conclusion results in  $x=2$

If the hypothesis is false, then the conclusion is invalid and the answer can be said is  $x=1$