

### 3.2.1. Translation Problems

**A.** Using the translation table given, **translate** each of the following English sentences into the formal language.

**P:** It's raining

**Q:** It's cloudy

**R:** It's warm

1. It's warm and it's not cloudy.
2. Either it's not raining or it's cloudy.
3. It's not warm and it's not raining.

**B.** Using the translation table given, **translate** each of the following English arguments into the formal language.

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**P:** We're having ice cream

**Q:** We're having cake

**R:** We're having champagne

**S:** The board is damaged

**T:** The processor is malfunctioning

**U:** The memory is faulty

(1)

1. We're having both ice cream and cake.
2. Either we're not having cake, or we're having champagne.

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∴ We're having champagne

(2)

1. The board isn't damaged, and the processor isn't malfunctioning
2. Either the memory is faulty or the processor is malfunctioning.

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∴ The memory is faulty.