> Please show **all** your work! Answers without supporting work will not be given credit.
> Write answers in spaces provided. Answering on the back of the sheet is allowed as
> well. You have 1 hour only to complete this exam.

Name:_____

1. Let p, q, and r be the propositions
   p: You have the flu.
   q: You miss the final examination.
   r: You pass the course.
   Express each of these propositions as an English sentence.

   (a) $\neg p$

   (b) $p \vee q \vee r$

   (c) $p \rightarrow q$

   (d) $(p \wedge q) \vee (\neg q \wedge r)$

2. How can this English sentence be translated into a logical expression?
   "*You can access the Internet from campus only if you are a computer science major or you are not a freshman*".

3. Which of these sentences are propositions? What are the truth values of those that are propositions?

   (a) Alexandria is the capital of Egypt.

   (b) Socrates is a man.

   (c) $x + 2 = 11$