Lab for Sections 3.3

Name_____

Use good notation and show appropriate work.

1. In each write out the (*i*) contrapositive, (*ii*) converse and (*iii*) inverse of the given conditional statement.

    My work on this worksheet is necessary for me to learn logic.

    (*i*)   contrapositive

    (*ii*)   converse:

    (*iii*) inverse:

2. Rewrite each statement in the indicated forms.

    (a) If I do not ask a question, then I will do poorly.

        (i)   only if

        (ii)   unless

        (iii) sufficient

        (iv)   necessary

        (v)   disjunction

    (b) I will vote this fall if and only if I am an educated and responsible citizen.

        (i)   necessary and sufficient

        (ii)   conjunction

3. Use truth tables to determine whether the following is a valid argument form.

$$p \rightarrow (q \vee r)$$
$$\sim q$$
$$\overline{\therefore \; p \vee r}$$