

**CSE 101**

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**Subject :** Assignment from Book

**Chapter No : 1**

**Section No : 2**

**Exercise No : 41**

**Answer:**

a) The output of the OR gate is  $q \vee \neg r$ . Therefore the output of the AND gate is  $p \wedge (q \vee \neg r)$ . Therefore the output of this circuit is  $\neg(p \wedge (q \vee \neg r))$ .

b) The output of the top AND gate is  $(\neg p) \wedge (\neg q)$ . The output of the bottom AND gate is  $p \wedge r$ . Therefore the output of this circuit is  $((\neg p) \wedge (\neg q)) \vee (p \wedge r)$ .