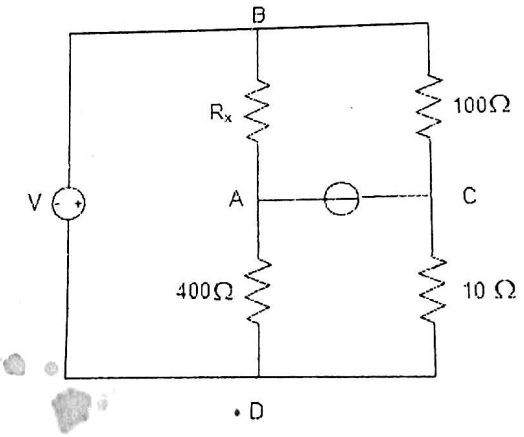
GET 201 **Applied Electricity I** **CA Test II** **1 hour**

1. Fill in the blank spaces below. (Write the answers in your answer sheet).

   I. The symbol for **admittance** is _____.
   II. The symbol for **susceptance** is _____.
   III. The reciprocal of **reactance** is called _____.
   IV. The reciprocal of **resistance** is called Conductance.
   V. If a circuit's total **impedance increases** while the source voltage is held constant, the circuit's total **current** _____.
   VI. In a **series** connection, is the total equivalent **conductance** *greater, equal to* or *less than* the individual **conductances**?

2. Find the value of the unknown resistance in the bridge circuit illustrated below;



3. *Perform the following operation and express the final answer in polar form .*

$$5 < 30^{o} + 8 < -30^{o}$$

4. *A series AC circuit exhibits a total impedance of 2.5k, with a phase shift of 30 degrees between voltage and current. Drawn in an impedance triangle, it looks like this:*