## Question one:

a) What is the difference between electric conductor and electric insulator?
b) How does the electric current flow?
c) Write the S.I unit of current, and give its symbol.
d) Name a device used to measure electric current.
e) Name a device used to measure the voltage.

Question two: An electric circuit is composed of a battery(9V), an open switch, and a lamp(12V) connected to each other via electrical wires.
1)Schematize the given circuit.
2)Is this circuit open or closed? Justify
3)Does the lamp glow? Justify
4) The switch is now closed.

a) Draw a new circuit.
b)Does the lamp glow normally, very dimly or brightly? Justify

Question three: Observe the adjacent circuit:
The voltage across the battery is 24 V and the voltage across the lamp is also 24 V .

1)Redraw the circuit and connect a voltmeter to measure the voltage of a lamp.
2)Connect an ammeter to the same circuit.
3)Determine with justification: $U_{P A}, U_{A B}, U_{B N}$ and $U_{P N}$.

