COLLEGE OF TECHNOLOGY **B-Tech**

Quick test no.1

EEC207: Circuit Analysis

Duration: 15mn

Name: Fomenky Foletac Nka-Folep **Matricule:** CTIHA016

NB on MCQ questions: read the questions carefully and mark an **X** *only* on the letter of the correct answer.

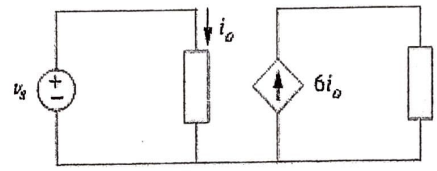
1. One millivolt is one millionth of a volt. (a) True (b) False

2. The unit of current is: (a) coulomb (b) ampere (c) volt (d) joule

3. A 4-A current charging a dielectric material will accumulate a charge of 24 C after 6 s. (a) True (b) False

4. The dependent source in the figure beside is:

(a) voltage-controlled current source
(b) voltage-controlled voltage source
(c) current-controlled voltage source
(d) current-controlled current source



5. In some circuit element the power is 20 W and the voltage is 10 V. How much current flows?

$P = 20W$, $V = 10V$, $I = ?$

But $P = IV$ and $I = \frac{P}{V}$

$\Rightarrow I = \frac{20}{10} = 2A$ $I = 2A$

6. A flashlight battery has a rating of 0.8 ampere-hours (Ah) and a lifetime of 10 hours. (a) How much current can it deliver? (b) How much power can it give if its terminal voltage is 6 V? (c) How much energy is stored in the battery in Wh?

a) $Q = 0.8Ah$, $t = 10h$, $I = \frac{Q}{t} = \frac{0.8Ah}{10}$, $I = 0.08A$

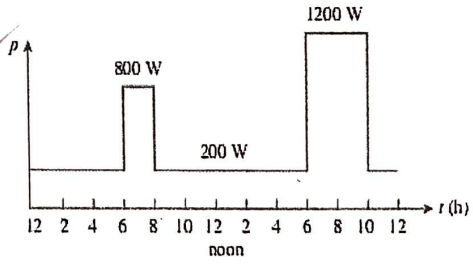
P = 0.8 Ah, rating = 0, t = 10 hours, I

b) $P = IV$, $V = 6V$, $I = 0.08A$

$P = 0.08 \times 6$

$P = 0.48W$

7. Figure beside shows the power consumption of a certain household in 1 day. Calculate: (a) the total energy consumed in kWh, (b) the average power per hour over the total 24 hour period.



tutorial 08/11/18
18/12/17

8. Find I and the power absorbed by each element in the network below: