Vikar Behgal

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-2 EXAMINATION- APRIL - ~~1021~~ 2019
B. Tech (2nd Semester) (ECE/CSE/IT/CE)

COURSE CODE: 18B11EC211 **MAX. MARKS: 25**

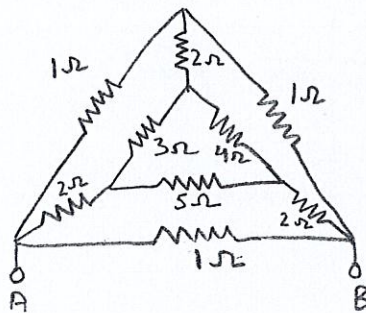**COURSE NAME: ELECTRICAL SCIENCES**

COURSE CREDITS: 04 **MAX. TIME:1.5 HR**

Note: All questions are compulsory. Carrying of mobile phone during examination will be treated as case of unfair means. Marks are indicated below each question
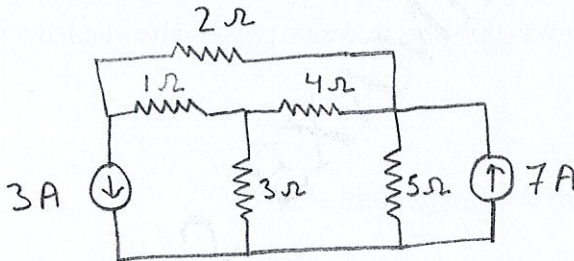

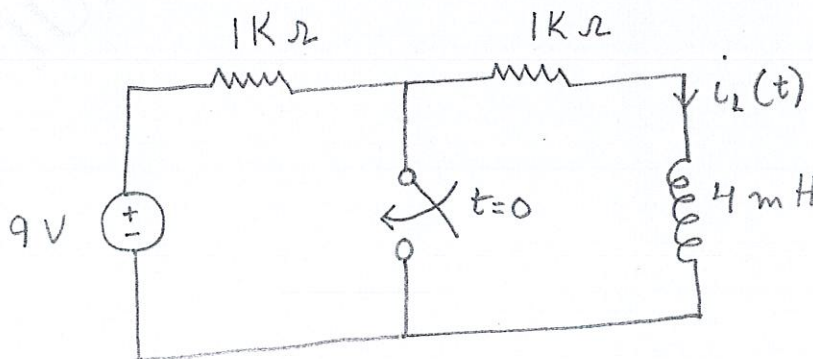**Q1.** **a)** Find equivalent resistance between terminals A & B. [2.5] CO1
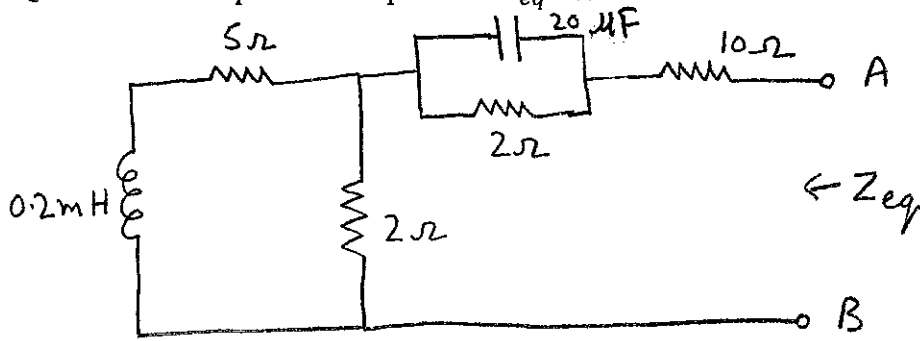

b) Find node voltages for given circuit. [2.5]

Q2. For the given circuit find current $i_L(t)$ at time **(a)** $t = -1\ s$, **(b)** $t = 0\ s$ and **(c)** [5] CO4
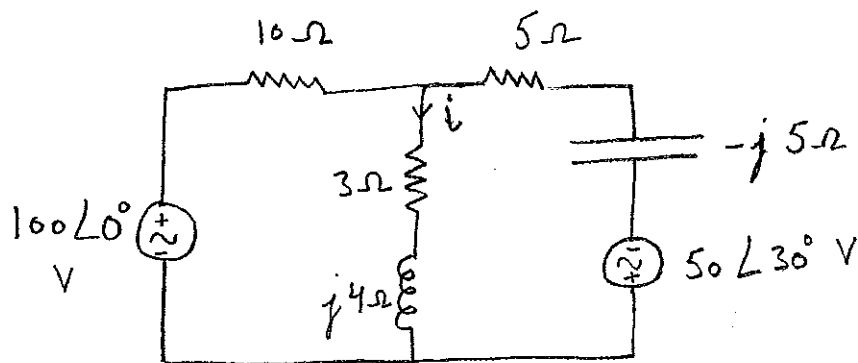$t = 5\ ms$.

Q3. Find the equivalent impedance Z_{eq} between terminals A& B.   [5] CO1

Q4. Find the current $i(t)$ in the following circuit.   [5] CO4

Q5. (a) Derive Average power for given voltage $v(t) = V_m \sin(wt + \theta)$ and current   [4] CO4
$i(t) = I_m \sin(wt + \phi)$. And also prove that the average power absorbed by pure reactive load is zero.

(b) Calculate rms value of current $i(t) = 5 \cos(200\pi t - 30^0)$.   [1]