GOVERNMENT POLYTECHNIC, BHADRAK
DEPARTMENT OF ELECTRICAL
INTERNAL ASSESSMENT 2022 (3RD SEMESTER)

Sub: Circuit & Network Theory (Th-II) **F.M.: 20** **Time: 1Hour**

QUESTION NO.1 AND NO.2 ARE COMPULSORY

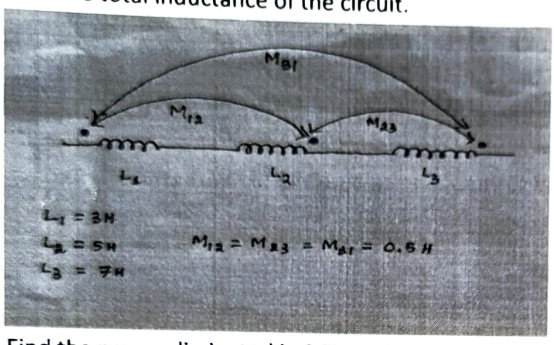
1. [2×5=10]

a) Write the statement of superposition theorem.

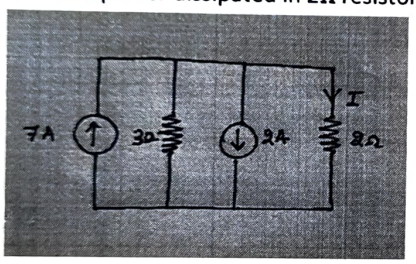
b) Draw Thevenin's equivalent circuit and norton's equivalent circuit.

c) What is co-efficient of coupling .Write the relationship between self inductance, mutual inductance and co-efficient of coupling.

d) Find the total inductance of the circuit.

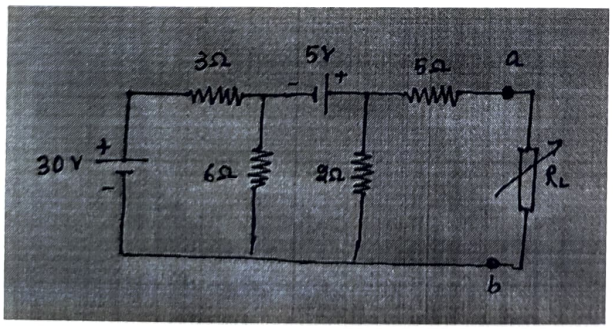


e) Find the power dissipated in 2Ω resistor.



2 . Write short note on B-H curve. What is hysteresis loop? [5]

3. Using maximum power transfer theorem , find maximum power transferred to the load resistance R_L [5]



4. Draw Thevenin's equivalent circuit between terminal 'a' and 'b' of the above figure. [5]