

Faculty of Sciences

B.Sc (Electronics) I-Year, CBCS-I Semester Backlog Examinations –January, 2021

PAPER: CIRCUIT ANALYSIS

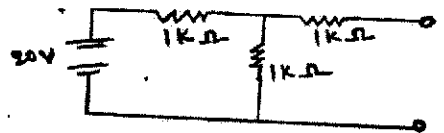
Time: 2 Hours

Max Marks: 80

I. Answer any four of the following questions

(4x20=80 Marks)

1. Define average and RMS values. Explain in detail about complex impedance and admittance.
2. State and explain Kirchoff's voltage and current laws.
3. State and explain Thevenin's theorem. Find Thevenin equivalent circuit for following circuit:



4. State and explain Maximum power transfer theorem. Give its applications.
5. Obtain frequency response of an RC circuit.
6. What are different types of filters? Obtain frequency response of a high pass filter.
7. Obtain expression for resonant frequency of a RLC parallel resonance circuit.
8. Explain working of a cathode ray tube.

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B.Sc (Electronics) I-Year, CBCS-I Semester Backlog Examinations -January, 2021

PAPER: CIRCUIT ANALYSIS (OLD)

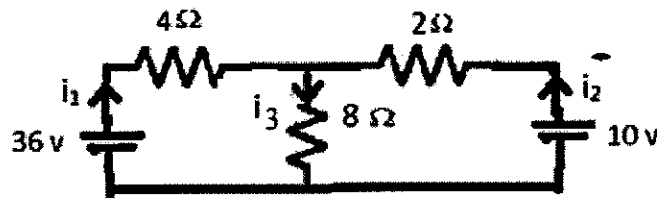
Time: 2 Hours

Max Marks: 80

I. Answer any **FOUR** of the following questions

(4x20=80 Marks)

1. Define average and RMS value of ac voltage. Derive the relation between them.
2. State Kirchoff voltage law. Determine the currents i_1 , i_2 and i_3 for the network shown below.



3. State and prove Nortons theorem.
4. State and prove Maximum power transfer theorem.
5. Explain the Transient Response of RC circuits with step input and time constant.
6. Discuss the frequency response of CR circuit as Low pass filter and High pass filter.
7. Define resonance and Q factor of a LCR series circuit. Obtain the resonance frequency of a series LCR circuit.
8. Draw the block diagram of CRO and explain its working.
