

Preparation

Student Group

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Preparation

Do math right

- calculate fractions in fractions correct: $\frac{\frac{A}{B}}{C} \neq \frac{A}{\frac{B}{C}}$
 $\frac{\frac{A}{B}}{\frac{C}{D}} \neq \frac{A}{B} \cdot \frac{C}{D}$
 $\frac{\frac{A}{B}}{\frac{C}{D}} = \frac{A \cdot D}{B \cdot C}$
- Rearrange fractions correct: based on $\beta = \frac{I_C}{I_B}$ on **cannot** derive $I_B = \frac{\beta}{\beta+1} I_C$.

Do physics right

- Do not miss the units. For physical properties these are not allowed to be neglected.
- Check the units. e.g. dB cannot be converted in V
- Once multiple components with indices are given (e.g. C_1 , C_2) write down the indices every time, except $C_1 = C_2$ is explicitly given.
- Check your (mis)conceptions on impedances
 - Check whether Z or $\underline{Z}$ is needed in formulas: $Z \neq \underline{Z}$
 - impedances are not (only) resistors, at least do not think of R is given as $\underline{Z}$.
 - For purely ohmic components the other way around is correct: $\underline{Z} = R$.
 - However, impedances 'act' like ohmic resistors in formulars.
 E.g. for the series circuit: $R_{eq} = R_1 + R_2 + R_3 + \dots \rightarrow \underline{Z}_{eq} = \underline{Z}_1 + \underline{Z}_2 + \underline{Z}_3 + \dots$

Do exam right

- Do not miss out questions. Sometimes there is more than one answer required

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