Revision Lecture Notes

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We had ten topics.

Three phase circuits – we knew how to get the π model.

We learnt about the faults we have on those systems, what they look like. Including whether they were symmetrical or unsymmetrical.

If we have a π model we know how to do analysis to find transients.

From the transient we can also see how assess find the stability.

Hints/Comments:

- 2hrs + 10mins
- 4 questions
- Open book
- Non-programmable calculator
- People can spend too long searching through their notes, try to avoid this.
- Hint: All the basic material you need is on the power-point slides.
- Large Laplace transform tables are a distraction. Try to avoid this.
- All matrices will either be totally imaginary or totally real. There will be no matrices with complex components.
- If you cannot solve the question numerically, then *nicely solve* the question symbolically and you could get up to 70% of the marks.

Questions:

- Question One: AC single phase circuit analysis.
- Question Two: Transmission Line modelling. LC(R) Model $\leftarrow VR\%,\ n$ (efficiency)
- Question Three: Fault Analysis. Symmetrical Fault. Can use Thevenin or Z-bus. Ha Pham recommends the Z-bus approach. There will be less than or equal to 4 buses $\Rightarrow 4 \times 4$ matrix.
- Question Four: Unsymmetrical Fault, and/or Stability, and/or Transient.

Questions:

Q1. *Topics to study for the final exam?*

A1. As listed above.

Q2. *Last topic – generators – going to be in the exam?*

A2. No.

Q3. *Long line model – complicated. Would it be in the final exam?*

A3. Could be. Ha Pham didn't want to specify which it would be. Likely to be Medium Line or Long Line.