

Feedback for EEE340 Session: 2010-2011

Feedback: Please write simple statements about how well students addressed the exam paper in general and each individual question in particular including common problems/mistakes and areas of concern in the boxes provided below. Increase row height if necessary.

General Comments:

On the whole pleased with the response to the paper. The majority of students answered the questions to a high standard.

Question 1:

- b) Common mistakes here were using incorrect voltage values or incorrect current (i.e. permutations of $V_i(\text{max/min})$ and $V_o(\text{max/min})$).
- c) Similar to above.
- e) Incorrectly calculating power dissipation in the series resistor.

Question 2:

- a) Some candidate omitted an example.
- c) Drawing exponential rather than triangle waveform.
- d) Using exponential formulas. The circuit uses an integrator.

Question 3:

- There was a typographical error on this question in Table III where a '–' character was represented by a '□' symbol. All students correctly interpreted this to mean a pulse varying from 0V to 9V. The error is believed to be due to an incompatibility with the university standard font. I will not be using this font again.
- a) Omission of saturation and linear region.
 - b) Incorrect labels or incorrect MOSFET on (conduction) time.
 - c) & d) Using the incorrect capacitor for switching times.

Question 4:

- a) Some candidates omitted the voltage sources that represent the transistor and diode conduction voltage drop.
- b) Omitting or incorrect conduction voltage drop for the average voltage calculation.
- c) Incorrectly determining max, min current because of choosing incorrect inductor voltage. Remember $V = L di/dt$ where V is the voltage across the inductor.