Review Notes for Exam 1, ME 331, Tuesday, Oct 27, in MEB 238 at 11:00

Topics to be emphasized. Unless specifically noted, all sections in the chapters should be reviewed.

EXAM 1

1) Chapter 1: a) Table 1.1; b) Example 1.4 but using \( h_r = \varepsilon \sigma (T_1^2 + T_2^2)(T_1 + T_2) \); c) Examples 1.7 and 1.9

2) Chapter 2: a) Secs 2.1, 2.3, b) thermal conductivity. Be sure that you know what property tables you need to look up properties. Sample property tables will be attached to the exam; c) Sec 2.4;

3) Chapter 3: a) all of Sec. 3.1: Plane wall; b) Sec 3.3 Radial Systems, optimal insulation thickness, c) Sec 3.5, d) Sec 3.6, Extended Surfaces, Figs 3.19 and 3.20 and Table 3.5. If needed, these figures and table will be attached to the exam.

4) Chapter 5: a) Sec 5.1-5.3, b) Sec 5.7 semi-infinite solid

5) Be prepared to iterate solutions, e.g., problems involving \( h_r \)

Sections that will not be covered:

1) Chapter 1: 1.3.2, 1.4-1.6
2) Chapter 3: 3.1.5, 3.2, 3.3.2, 3.6.4, 3.6.5, 3.7, 3.8, 3.9,
3) Chapter 4
4) Chapter 5: 5.3.2-end of chapter

The test will be closed book. You can have one side of 1 piece of paper with handwritten notes.

All necessary information will be included on the test paper.

You must supply your own test paper, calculators and pencils,