

Differential Equations
Final Exam Guide
(Suggested Practice Problems)

- ① Separation of variables (2.2)
2.2 # 17, 20, 23, 25
- ② Auxiliary Functions
4.3 # 1-14, 33
- ③ Integrating Factors
2.3 9, 15, 17, 21, 23
- ④ Wronskians & Variation of parameters
4.6 # 4, 5, 9, 11, 15
- ⑤ Undetermined Coefficients
4.4 # 9, 11, 15, 21, 22, 23
- ⑥ Cauchy - Euler
4.7 # 1-7 odd
- ⑦ Laplace transforms (+ worksheets/Review)
7.3 20, 25, 27, 29
7.3 (s-axis) # 1-9
(t-axis) # 13-20
7.4 use of theorem

$$\mathcal{L}\{t^n f(t)\} = (-1)^n \frac{d^n}{ds^n} F(s)$$