Differential Equations Final Exam Guide (Suggested Practice Problems)

1. Separation of Variables
   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
   \[ y(\delta^n f(t)) = (-1)^n \frac{d^n}{ds^n} F(s) \]