This exam covers Sections 11.1, 11.2, 14.6, 15.1, 15.2, 15.5, 16.1, 18.1, and 18.2. In particular, the exam will focus on the following topics:

- integration techniques, including integration by parts

- qualitative analysis of differential equations

- convergence/divergence of series

- Taylor series and power series, interval of convergence

- obtaining new power series from known power series

Recommended exercises for review:

- 11.1.2, 11.1.4 (improper integrals)

- 11.2.6, 11.2.8 (integration by parts)

- 15.2.8, 15.2.10 (power series)

- 16.3.1, 16.3.3 (convergence of series)

- 18.2.6, 18.2.10 (qualitative analysis)