



Kreyszig (9th. edition) section 2.7

3,19

Kreyszig (9th. edition) section 2.10

1,4

Kreyszig (9th. edition) section 2.R (review questions and problem page 102)

26,27

Exam problems

A-14 Find a general solution of the differential equation

$$y'' - (a + b)y' + aby = 0$$

for all real numbers a and b . Subsequently, find a general solution of the differential equation

$$y'' - 2ay' + a^2y = e^{ax}.$$

Multiple-choice question

- 1** Suppose that $c_1 + c_2 \cos x$ is a general solution of $y'' + p(x)y' + q(x)y = 0$ with continuous coefficients p and q . Then, a particular solution of $y'' + p(x)y' + q(x)y = \sin(x)$ is given by
- A:** $x \sin x + x$ **B:** $\sin x - x \cos x$ **C:** $1 + \sin x$ **D:** $1 + \cos x$