King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 260 (171) Sec 1 - Quiz II

Name: ID: Serial No.:

1. Find a basis for the solution space of the homogeneous system

$$
\begin{aligned}
x_1 - 4x_2 - 3x_3 - 7x_4 &= 0 \\
2x_1 - x_2 + x_3 + 7x_4 &= 0 \\
x_1 + 2x_2 + 3x_3 + 11x_4 &= 0
\end{aligned}
$$

2. Find the general solution of

- $y'' + 2y' + y = 0$
- $y'' + 4y' + 3y = 0$
- $y^{(4)} + 18y'' + 81y = 0$