Prøveeksamen/mock examination problems: all problems

Exerc. 1, Prob. 4
Exerc.2, Prob. 1
Exerc. 3, Prob. 3
Exerc 4, Prob.1, Prob. 2
Exerc 5, Prob. 1, Prob. 2, Prob. 3
Exerc 6, Prob. 3, Prob. 4
Exerc. 7, Prob. 3
Exerc. 8, Prob 1, Prob 2 (ii)
Exerc. 9, Prob 1, Prob. 3
Exerc. 10, Prob 2, Prob 3, Prob 4, Prob. 5
Exerc. 11, Prob. 1, Prob. 4

Oblig/mandatory exercises: Prob 2, Prob. 3, Prob. 4

General comments: There will be a comprehensive formulary during the exam. However one should know by heart basic results as e.g.

1. Ito's formula w.r.t. the Brownian motion (see solutions to Exercises 9, Prob.1): If

$$Y_t = Y_0 + \int_0^t K_s ds + \int_0^t H_s dB_s.$$

Then

$$\begin{aligned} g(t, Y_t) &= g(0, Y_0) + \int_0^t \frac{\partial}{\partial s} g(s, Y_s) ds + \int_0^t \frac{\partial}{\partial x} g(s, Y_s) K_s ds \\ &\quad + \int_0^t \frac{\partial}{\partial x} g(s, Y_s) H_s dB_s + \frac{1}{2} \int_0^t \frac{\partial^2}{\partial x^2} g(s, Y_s) (H_s)^2 ds. \end{aligned}$$

2. Girsanov's theorem.