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Faculty of Science

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## Exercises for Advanced Physics 1, 2019 term 3

### **Exercise Set 1**

(Due date: Tuesday, October 8, 2019)

#### **Exercise 1 (Magnetic devices in everyday life) (5 points)**

Please describe three devices where magnetism is used. Include at least one for which it is important to understand the microscopic origin of magnetism. Explain. (At least 100 words).

#### **Exercise 2 (Not so free electrons) (5 points)**

Explain in your own words why in a ferromagnetic material like magnetite, there are constraints on the movement of electrons. (At least 100 words).