

TTY

SET-6216 Introduction to Smart Grids

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Exam 13.12.2012

Own calculator is not allowed to use in the exam

1. Define shortly the following terms or concepts (2p/each)
 - a) LVDC microgrid
 - b) Day-ahead (spot) market
 - c) Virtual Power Plant (VPP)
2. Explain briefly the main challenges and risks in developing of Smart Grids (6p)
3.
 - a) Which kind of voltage levels there exist in a nationwide power system from big power plants to small household level customers? (3p)
 - b) What are the reasons to use various voltage levels in a power system? (3p)
4. Describe briefly the evolution of electricity metering (6p)
5.
 - a) What is the main difference between “*Demand Response*” and “*Energy saving*”? (3p)
 - b) List the different roles that Electric Vehicles (EV) could have in Smart Grids. (3p)

