



Høgskolen i Telemark

EXAM
4502 001 Alpine biodiversity and climatic change
12.01.2015

Time:	4 timer / hours
Language:	English
No pages:	2 including front page
Comment:	Dictionaries are allowed
Appendix:	None

Exam results will be available on net via Studentweb



- Question 1** Explain, with examples, differences between Alpha diversity (α -diversity) and Beta diversity (β -diversity).
Floristic differences between vegetation plots sampled along an environmental gradient can be estimated by Sørensen's index. How is this index calculated?
- Question 2** Give some examples on general trends in species richness along the following environmental gradients:
Soil richness
Biomass/competition
Altitude
Temperature
Snow cover duration
- Question 3** The Holocene Epoch covers approximately the preceding 11,500 years since the last glaciation (Weichsel). Explain the main variations in temperatures, glacier distribution and vegetation development during the Holocene.
- Question 4** Interpret the ordination diagram below.
The ordination shows a species-environmental biplot (species and environmental variables) of a CCA analysis (direct ordination) based on vegetation analyses of 25 sample plots. The eigenvalues were 0.837 (axis 1) and 0.493 (axis 2).

