



**EXAMINATION IN:
BI3063 Biological and genetic stock management**

Contact person/Subject teacher during exam:

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Number of hours: 4

Credits: 7.5 SP

Permitted aids: Calculators Citizen SR-270X, HP30S

Language: ENGLISH

Attachments: 0

Grades to be announced on June 14, 2012

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QUESTIONS 1, 2 and 3 HAVE EQUAL WEIGHT

ENGLISH:

Question 1.

- a) Explain the following abbreviations: MSY, MLY, TAC, SF (net gear), and L_{50} (net gear)
- b) Describe briefly the tools and methods available for fisheries management in regulating the take-out from fish stocks.
- c) What is the main objective of ICES (International Council for the Exploration of the Sea)?
- d) Describe briefly (include a flow-chart if you want) the work process in forehand of the implementation of an ICES recommendation.

Question 2.

- a) Define “Effective population size” (N_e) and mention some factors which affect its size.
- b) How large is the N_e if one female is crossed with 100 males (diploid organism, nuclear autosomal locus, equally sized offspring groups)?
- c) What is “domestication selection”?
- d) What is meant by “Significant Evolutionary Unit”?

Question 3.

- a) During the last century, two of the economically most important North Atlantic fish stocks collapsed due to heavy overexploitation. Which stocks, and what are their stories?
- b) Describe the life cycle of the North East Atlantic Cod (NEAC).
- c) What differences in life history traits and biology in salmon and cod can explain why salmon stocks usually show larger inter-stock genetic differences than cod stocks do?