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Guidelines for the examination paper in Telecommunications Economics. Winter 2010/2011, date 18.02.2011.

Criteria for top performance in assessments of examination in 'Telecommunications Economics'.

To obtain the highest grades in the assessments of examination in 'Telecommunications Economics' the following general criteria shall be met:

The student shall

- *demonstrate knowledge of all the relevant concepts and factual items regarding the questions raised and of the relationships between these*
- *be able to design an analysis to give a thoroughly description of the problem and find possible solutions to the questions raised*
- *give a survey of the relevant economic issues regarding the questions raised*
- *explain constraints and uncertainties in the presented solutions, often in the form of trade-offs between different objectives.*

As more concrete criteria - depending on the actual questions raised in the examination - the following shall be demonstrated:

Knowledge of

- *the main trends and relationships in the ICT sectors (ICT=Information and Communication Technology) regarding demand, supply, prices, market players, technical solutions, regulation etc.*
- *the main economic and technical concepts and items used in the ICT sectors, especially for telecommunication, the Internet and supply of radio and TV channels.*

The minimum criteria for passing the examination.

The student shall demonstrate knowledge of

- *the most important concepts and factual items that are relevant for answering the questions raised*
- *the most relevant trends and relationships in the ICT sectors*
- *the possibilities and limitations of the use of relevant economic analyses.*

Acceptance of a limited amount of small and medium failures in the analysis presented, but normally no major failures can be accepted.

Question A.

There are different ways to answer the question. It is important to show an understanding and overview of different relevant concepts and to organise the presentation in a well-structured way.

The answer should include several of the following issues:

- Explain the dual set-up for regulation: General competition regulation (mainly ex post) and sector specific telecommunication regulation (mainly ex ante).
- Why is it necessary to regulate different parts of the tele sector (essential facilities, interconnect, externalities, economies of scale and scope etc.)
- Arguments behind the set-up with two kinds of regulation.
- List the main focus for the two kinds of regulation:
 - a) Competition legislation is dealing with prohibitions regarding margin squeeze, predatory pricing, different kinds of bundling, tying and volume discounts made by dominant companies.
 - b) The sector specific telecommunications regulations is dealing with the EU market analyses and the designation of telcos that have Significant Market Power (SMP) on different markets, decisions about prices for wholesale and retail products, allocation of spectrum licences, Universal Service Obligations etc.
- The framework set by EU and implemented by the national regulators.
- Current issues regarding the development of interconnection regime: a decrease of termination payments, maybe a move towards Bill and Keep (peering) as part of the merge between the internet regime and the traditional telecommunication interconnection regime.

Question B.

There are different ways to answer the question. It is important to show an understanding and overview of different relevant concepts and to organise the presentation in a well-structured way.

The answer should include several of the following issues:

- Present the traditional economic analyses regarding the rule about "price = marginal costs" and show how this rule creates a problem for the telecommunication sector.
- Discuss the concept of natural monopoly and essential facilities (bottlenecks facilities).
- Present different kinds of price schemes and the rationale behind them.
- Present different dimensions in the definitions of costs and how the different cost concepts are used.
- Explain cost models for infrastructure.
- Discuss how financial analyses can be made as decision support for price settings.
- Discuss price setting for new products or services on a market, for which "critical mass" only can be expected to be obtained within a medium time horizon.
- Present some of the main rules from competition legislation regarding the mandatory obligations for dominant companies in relation to price setting.