

Examination of Part 1 of the course
Management of Innovation Processes (GEO3-2221)
(BSc-NW&I, 3rd year, period 1, time slot D)
2011-2012

October 5, 2011
13.30 – 16.30 hours

Question 1 (6 credits):

Innovation is a risky and uncertain organizational process.

- a) Explain by means of the Product Life Cycle why firms must innovate and why this is a risky and uncertain process.
- b) What 4 types of innovation do *Tidd & Bessant* distinguish and what do they mean?

Question 2 (9 credits):

Tidd & Bessant represent the innovation process as an innovation funnel.

- a) Why do they represent the innovation process as an innovation funnel?
- b) Which stages and sub-stages do they distinguish in the innovation funnel?
- c) Which enabling routines should be carried out during each (sub)stage?

Question 3 (12 credits):

Building and establishing an innovative organization is a prerequisite for successful innovation. An appropriate organization structure is an important part of such an organization.

- a) Which three primary types of organization structure/steering can be distinguished?
Explain them!
- b) To which types of organization structure distinguished by *Mintzberg* do they correspond?
- c) What primary type of organization structure is represented by *Schwaninger's* Viable System Model?
- d) Describe and explain the Viable System Model.

Question 4 (15 credits):

Tidd & Bessant distinguish 2 types of innovation strategy.

- a) Which 2 types do they distinguish and what do they mean?
- b) Where in the Product Life Cycle should they be applied?
- c) How are both types of strategy related to the subsequent activities of knowledge building, strategic positioning and business investment?
- d) Which types of path-dependency of firms can be distinguished and how do they affect innovation strategy?
- e) Which strategic criteria should firms apply for the selection of an idea/concept for further development?

Question 5 (9 credits):

- a) To which fundamental question regarding knowledge/technology development by firms is networking the answer?
- b) Why do firms participate in collaborative innovation networks?
- c) What is the main problem faced by firms interested in networking and how is this problem solved in practice?

Question 6 (9 credits):

For every innovation a firm should build a business case that is updated in each stage of the innovation funnel in order to assess the total risks, costs and revenues of the innovation. Firms show in practice to have large problems with these assessments.

- a) Which problems do they face with respect to estimating total risks?
- b) Which problems do they face with respect to estimating total costs?
- c) Which problems do they face with respect to estimating total revenues to be derived from the adoption and diffusion of the innovative concept among users in the successive stages of the Product Life Cycle?

Question 7 (12 credits):

Based on combining old and new technologies and markets a typology of 4 innovative product concepts can be distinguished.

- a) Which 4 innovative product concepts can be distinguished and what are their characteristics?
- b) How can you investigate consumer demand for each type of innovative product concept?
- c) What are the differences between product and service innovations?
- d) What factors and how do they determine the adoption of an innovative product by an user?

Question 8 (12 credits):

Apart from internal innovation and direct integration within the firm, a firm can also choose to develop an innovation in a venture.

- a) What types of ventures for innovation can be distinguished and under which circumstances are they applied?
- b) Why are corporate and new ventures established?
- c) What are the risks of collaborating with other firms within a venture?
- d) Which personal characteristics increases an inventor's chances of becoming a successful entrepreneur?

Question 9 (6 credits):

- a) What 3 conditions distinguished by Teece determine whether or not a firm is capable of capturing the benefits from an innovation?
- b) How do these conditions affect a New Technology Based Firm's capability to benefit from its knowledge/technology invention during the Product Life Cycle?

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