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Final Exam

This is a 3 hour exam. There are three equally weighted questions. Please read them carefully and answer *each* of them. If you have problems understanding a question please do ask. *Good luck !!!*

Question 1: Consider two islands, Isla de Pascua and Gressholmen, both with an endowment of 9 Easter eggs and 9 Easter bunnies. Suppose that the preferences of the inhabitants on either island can be represented by $U(x_e, x_b) = x_e^{\alpha} x_b^{1-\alpha}$, where x_e and x_b are the quantities consumed of Easter eggs and Easter bunnies respectively, and α equals 2/3 on Isla de Pascua and $\alpha = 1/3$ on Gressholmen.

a) Find the autarky equilibrium (relative) price on each island. Explain what pattern of trade you expect to see as soon as both islands engage in free trade.

b) Find the free trade equilibrium, i.e. the equilibrium (relative) price and the quantities traded. Show that there are gains from trade.

c) Suppose the endowments were slightly different, namely 9β eggs on Isla (still 9 bunnies), and 9β bunnies on Gressholmen (still 9 eggs). Find the value of β (if any) for which they do not trade. What does this tell you about the interaction between Heckscher-Ohlin style endowment differences and demand differences.

Question 2: GATT/WTO.

a) Explain the notions of 'MFN', 'national treatment', and 'regional trade agreements as an exception', and for each provide the number of the pertinent GATT/WTO article(s).

b) Consider a tariff game between two large countries, as in the work of Bagwell and Staiger. Let the welfare of each country be given by $W_i(t_i, t_{-i}) = 0.125 + 0.25(t_i - t_{-i}) - t_i(t_{-i} + t_i)$ where $i \in \{home, foreign\}$. Find the optimal tariffs as a best response to the tariff set by the other country. Are tariffs strategic complements or substitutes? Determine the Nash equilibrium in tariffs, as well as the globally optimal tariff regime(s).

c) Continuing from part b), let this be a repeated game, and suppose both governments have the same discount factor. What is the critical discount factor that is required to render the symmetric cooperative outcome self-enforcing under the threat of Nash-reversion?

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Question 3: New (new) trade — the monopolistic competition model.

a) Describe the Dixit-Stiglitz-Krugman monopolistic competition trade model and state its main equations. Explain why it is able to account for intra-industry trade whereas the 'old' trade theory was not.

b) Describe in detail how Melitz extends the monopolistic competition trade model to allow for heterogeneous firms, and explain the effects of a decrease in trade costs on the profits of individual firms and the equilibrium productivity thresholds in this model.

c) Briefly summarize the 'firm scope' paper of Nocke and Yeaple. What are the additional effects of a decrease in trade costs when firm scope is taken into account?