Topics covered: What's Development?  What's the Food Problem?  How Can LDCs Increase Their Food Production?

Source of Questions:  Questions will draw on the readings (study questions), lectures, and videos.

Structure of the Exam
1. Multiple Choice (45%)
   Fifteen questions from each topic (1 point for each question), drawn primarily from the readings (study questions), but also from the lectures.

2. Identify Countries in Africa on a Blank Map (5%)
   Study a map of Africa, so you know the location of Angola, Botswana, Ethiopia, Ghana, Kenya, Mali, Malawi, Mozambique, Namibia, Nigeria, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Zambia, and Zimbabwe. I will select 5 of these countries and ask you to identify them on a map of Africa.

3. Food Requirements Problem (5%)
   I'll give you data about a country's projected annual rate of population and income growth, and its income elasticity of demand for food. You must calculate the country's demand for food next year. I'll also give you an estimate of how much the country is projected to increase its food supply and ask you to discuss the implication of the demand and supply projections on next year's food prices.

4. Short Answer (15%)
   You must answer 5 short-answer questions related to material covered under each of the 3 topics (total of 15 questions) we have covered. For each topic, you will have the choice of answering 5 from among 7 short answer questions. Each question/answer will be worth 1 point. The short answer questions will be drawn from the key words/concepts listed below:

Terms/concepts:  

"What is Development?"
  globalization, examples of economic aspects of globalization, driving force for economic integration, examples of cultural integration, worldwide revolution of rising expectations, previous waves of globalization, what's new about globalization, examples of specific factors that have made rapid globalization possible, what are 2 positive & 2 negative aspects of globalization, skills you will need to be competitive in a global economy, global dilemma, driving forces, global sustainability, examples of global challenges/spillover impacts that threaten our prosperity, root cause of global challenges, third world, G-8, G-20, developing countries, why growing inequality between DCs & LDC should concern us (so what?), traditional definition of development, today's broader concept/new definition/goals of development, examples of the World Bank's social indicators, some criticisms of the market-driven development model, dangers of unilateralism, why the US role as a world leader is declining

"What is the Food Problem?"
  world's major grains (3 most important), tubers & legumes (2 examples), why centers of origin are important to us, 3 factors that cause food demand to change, 3 factors that determine consumers' tastes & preferences, Engel's Law, income elasticity of demand, foods with a high/low income elasticity of demand, right to food, national vs. household food security, how households achieve food security, why national food security doesn’t insure household food security, chronic food insecurity, region most affected by chronic food insecurity—most people and highest incidence, consequences of chronic food insecurity, underlying causes of chronic hunger/food insecurity, why has there been limited success in
reducing chronic food insecurity, acute hunger/food insecurity, current/recent causes (triggers) of acute food shortages related to political, weather/natural disaster, social, and economic factors, who acute food shortages are affecting today, how famines have been prevented in recent years, famine, major cause of famine, ending world hunger–optimist's & pessimist's arguments (3 examples of each), what's needed to insure food security/reduce hunger & poverty (2 examples of supply-related, demand-related, and policy-related solutions), progress in reducing hunger since the early 1990s, interrelated causes of the food crisis in Sub-Saharan Africa (5 examples)

How Can Developing Countries Increase their Food Production?"
Characteristics (4 examples) of traditional farming systems, how farmers have increased food production throughout history (i.e., before modern technologies became available), poor but efficient, limitations (2 examples) of traditional farming systems, farming practices (3 examples) based on modern science, limitations (2 examples) of modern farming systems, why some farmers in developing countries use improved crop varieties, fertilizer and insecticide but few use machinery (i.e., tractors), what most of the increase in food production in LDCs (especially Asia) was due to, double green revolution (i.e., what future technologies must do), appropriate technologies, CGIAR centers’ agricultural research priorities (3 examples), why CGIAR research is a public good, types of crops on which CGIAR centers focus, partners/collaborators (3 examples) in the international agricultural research system, recent agricultural successes (3 examples) benefiting LDCs, why the GR emphasized biological rather than mechanical technologies, regions, crops & environment that benefitted most from the GR, how international scientists develop new crop varieties, traits (3 examples) of modern rice varieties, what crops, region & environment benefited most from the GR, overall impact (3 examples) of the GR in wheat & rice (1960-90), complementary factors that contributed to the success of the GR in Asia, criticisms (2 examples) of the GR in Asia, why technology alone isn't sufficient, why the impact of the GR has been limited (3 examples) in Africa, type of biotechnology that's most controversial, potential benefits (3 examples) from biotechnology, concerns (2 examples) of LDCs/Europe regarding biotechnology, promising GMO-based technologies (3 examples) for food crops in LDCs, new opportunities/non-traditional crops (2 examples) for niche markets, what a 2nd GR that’s greener/smarter must focus on (2 examples), what LDC governments should do (3 examples) to solve the food problem, what DCs should do (2 examples) to solve the food problem

5. Essay (30%)
Answer any 2 of the following 3 essay questions. Each question is worth 15 points. Your answers to the questions under each topic should be no longer than 2 pages (1.5" line spacing, 12 point font, 1" margins). Begin each essay on a new page. Type your name and seat number at the top of each page. Clearly identify each part of your answer by first typing the question (including the letter--a, b, c, d, e--associated with the question), followed by your answer. Write your answers as completed sentences--not just a list of words. You may refer to your class notes and study questions, but you may not consult with fellow students. You must turn in your essays at the beginning of class on Tuesday (before the exam).

What is Development?
In the past, economists measured development in terms of economic growth. Today, we realize that economic growth and economic development are two very different concepts. a) What is the traditional definition of development and why is this definition not a good measure of development (what's missing)? b) What is today's broader concept of development? Discuss 6 goals of development that illustrate this broader concept. c) Describe 3 “social indicators” that the World Bank uses to measure progress in improving the standard of living in a country and discuss why these indicators are useful. d) Describe 2 indices of development and discuss the strengths (why these indices are useful) and weaknesses/criticisms of these indices. e) In recent years, critics have increasingly argued that we need a new development model. Discuss 3 criticism of the market driven development model.

Example of how to format your answer to What is Development?
Economic growth and economic development are two very different concepts. a) The traditional definition of developments (your discussion). However, this is not a good measure of development because (your discussion). b) Today's broader definition of development (your discussion). Six goals of development that illustrate this broader definition include (your discussion). c) The World Bank uses various social indicators to measure progress in improving the standard of living in a country, including (your discussion). These are useful because (your discussion). d) In addition, various groups have created indices of development, such as (your discussion). The strengths of these indices are (your discussion). e) In recent years, some people have argued that there is a need for a new development model. Criticism of the market-driven development model include (your discussion).

**What is the Food Problem?**

Chronic food insecurity, acute food insecurity, and famine are problems in some LDCs. a) What is chronic food insecurity? What 3 groups are most vulnerable and what are the consequences of chronic food insecurity? b) Discuss 4 of the underlying causes of chronic food insecurity and identify its primary cause. c) What is acute food insecurity? Discuss 4 current/recent causes/triggers (categories, with examples) of acute food shortages. d) What is famine? What is its major cause? Give 1 examples of a LDCs that has experienced famine and identify the cause of famine in that country. e) Today, what is the most important food problem—chronic food insecurity, acute food insecurity, or famine? Discuss why this is the most important problem and why there has been limited success in addressing/solving this problem.

**How Can LDCs Increase their Food Production?**

Due to the Green Revolution, since the 1960s rice and wheat yield and total production have rapidly increased in many LDCs—especially in Asia. However, in order to meet their future food needs, LDCs will need to further increase food crop yields and production. a) What was the GR? What are 3 traits of modern rice varieties and how does each of these traits benefit LDC farmers? b) Discuss the overall impact of the GR in wheat & rice (1960-1990) and how did it (3 examples) benefit farmers and/or consumer? c) What are some of the criticisms (3 examples) of the GR? d) What are the potential benefits (3 examples) from biotechnology/genetic engineering; what are 3 concerns that some LDC have about biotechnology/genetic engineering; and despite these concerns, why are some LDCs encouraging their farmers to plant GM varieties? e) Today, the world needs a second Green revolution that is greener and smarter than the first Green Revolution. On what should the 2nd Green Revolution focus? Discuss 3 future technologies, investments, and/or programs that are needed to increase food production in poor countries.