

COURSE NO. : ECON F313  
COURSE TITLE: ISSUES IN ECONOMIC DEVELOPMENT  
WEIGHTAGE : 40 %

DATE: 14 DEC 2015  
TIME: min 180

**COMPREHENSIVE EXAMINATION**

**Note:**

- Write clearly your **NAME** and **ID. No.** in the space provided. Attempt all questions.
- This paper consists of two Parts:  
**PART – A (Closed Book: 15 marks) and PART-B (Open Book: 25 marks).**
- After completing PART-A (Closed Book), submit it and collect answer sheet for PART-B (Open Book) and attempt.

STUDENTS MUST COUNT/CHECK THE NUMBER OF PAGES IN THIS EXAMINATION PAPER BEFORE BEGINNING TO WRITE, AND REPORT ANY DISCREPANCY IMMEDIATELY TO THE INVIGILATOR.

**PART-A (Closed Book)**

**[15 Marks]**

**Answer the following questions directly on these sheets. For multiple choice questions (Section-1) choose the correct best answer and Circle clearly only one answer per question. Corrections/overwriting/illegible answers are strictly invalid. Each question carries equal marks.**

**1) Which of the following is not an important objective of development?**

- A. increases in individual and national self-esteem
- B. increases in per capita income
- C. the expansion of available choices
- D. all of the above are important objectives of development

**2) The core values of development include**

- A. the ability to meet basic needs.
- B. increasing income per person.
- C. reducing the inequality of income.
- D. all of the above.

**3) Fill in the blanks. Many economic development theories focus on quantifiable factors such as \_\_\_\_\_, which are necessary for economic development but not \_\_\_\_\_. This suggests that there are some other important non-easily quantifiable factors such as \_\_\_\_\_, which are often ignored.**

- A. institutions; important; labor
- B. institutions; important; capital
- C. savings; sufficient; capital
- D. savings; sufficient; social capital

**4) Development as freedom," in the view of Nobel-prize winner Amartya Sen, refers to**

- A. the freedom to use your resources in whatever way that you wish.
- B. the maximization of economic growth.
- C. the capacity for choice among improved economic goods.
- D. None of the above is correct

**5) Which of the following is not an indicator that is used by the World Bank in measuring the level of economic development?**

- A. adult literacy rate.
- B. infant mortality rate.
- C. life expectancy at birth.
- D. all of the above are not used by the World Bank.

**6) Which of the following statements about income convergence are true under the Solow Model?**

- A. two countries that do not have access to the same technology will not converge
- B. two countries that do not have the same savings rate will not converge=
- C. two economies that start off with different capital stocks, but have the identical savings rate, population growth rate, and technology, eventually will converge
- D. all of the above

**7) In more modern times as opposed to the times of Malthus, higher standards of living appear to**

- A. decrease death rates and also decrease birth rates.
- B. decrease death rates and have no effect on birth rates.
- C. decrease death rates and increase birth rates.
- D. have had effects on neither death rates nor birth rates.

**8) In endogenous growth models, in contrast to the earlier neoclassical models of economic growth, there is more emphasis on**

- A. Externalities.
- B. Increasing returns to scale.
- C. Human capital.
- D. All of the above.

**9) The linear stages theory of economic growth fails to recognize that increased investment is**

- A. a necessary but not a sufficient condition.
- B. a sufficient but not a necessary condition.
- C. both a necessary and a sufficient condition.
- D. neither a necessary nor a sufficient condition.

**10) More recent calls for a “big push” strategy are concerned with which of the following?**

- A. A simultaneous increase in investment in many different sectors, as well as complementary policy changes and technical interventions
- B. A national plan with an administrative structure to direct investments, technical intervention, and policy changes
- C. A big increase in foreign aid
- D. All of the above

**11) The new growth theory attempts to explain**

- A. the rate of population growth within a country.
- B. why there are diminishing returns to capital.
- C. the rate of capital accumulation within a country.
- D. the factors that determine the size of the Solow residual.

**12) According to the Neo-Marxists, what dynamic reinforces underdevelopment?**

- A. The competitive nature of capitalism
- B. The need for labor imports into the developed countries
- C. The need to extract excess value from under-developed countries, particularly with raw materials
- D. The institution of heavy trade barriers by developed countries against developing countries

**13) What do dependency theorists believe?**

- A. That free-market development primarily helps the rich.
- B. That free-market development primarily helps the rich.
- C. That economic growth is dependent on the poor.
- D. All the Above

**14) Which of the following is a criticism of the neoclassical counter-revolution school's approach?**

- A. Externalities are common in developing countries.
- B. Inequality may worsen when interventions are removed in developing countries.
- C. Markets are not competitive in developing countries.
- D. All of the above.

**15) For the Solow model to accurately explain the observed divergence of growth experience around the world would require**

- A. differences in savings rates across countries.
- B. inadequate educational opportunities in poor countries.
- C. differences in population growth rates across countries.
- D. barriers to the introduction of new technologies.

**16) According to the supply side of the vicious circle theory of development, a country is poor because**

- A. underemployment is too widespread.
- B. resource allocation is poor.
- C. technology levels do not allow for self-sufficiency.
- D. it was previously too poor to save and invest.

**17) The Marxian dialectic involves, in order, the following economic stages:**

- A. capitalism, feudalism, communism, and socialism.
- B. socialism, communism, capitalism, and high-consumption society.
- C. feudalism, capitalism, socialism, and communism.
- D. feudalism, socialism, communism, and capitalism.

**18) Criticisms of Rostow's stages of development include**

- A. conditions for takeoff are contradicted by historical evidence.
- B. characteristics of one stage are not unique to that stage.
- C. the difficulty of testing the stages scientifically.
- D. all of the above are correct.

**19) Critical minimum effort refers to**

- A. the minimum labor input required to raise the  $MP_L$
- B. the ideal ratio in which to combine labor with capital
- C. the big push advocated to raise an economy from continued stagnation
- D. both (A) and (B)

**20) The synchronized application of capital to a wide range of different industries is called \_\_\_\_\_ by its advocates.**

- A. balanced growth.
- B. indivisibilities.
- C. capitalization.
- D. elasticity of capital.

**21) Important beliefs of the structuralist school include which of the following?**

- A. The northern developed countries do not share the wealth generated from productivity enhancing technological improvements due to problems in the political structure.
- B. A completely free market approach will always yield the most efficient and equitable outcome
- C. One way for southern countries to develop is to substitute imported industrial goods with domestically produced ones.
- D. Both A and B

**22) According to Lewis's model, the dual economy grows only when**

- A. the modern sector increases its output share relative to the traditional sector.
- B. modern manufacturing sector is labor-intensive.
- C. agricultural sector uses modern equipment.
- D. agricultural sector hires labor economically.

**23) In Kremer's O-ring model,**

- A. workers are assumed to supply labor inelastically
- B. bottlenecks reduce the incentive for workers to invest in skill development.
- C. low-skill workers tend to wind up working with other low-skill workers
- D. All of the above are correct.

**24) Hausmann-Rodrik-Velasco's "growth diagnostic framework" argues that the development strategy must**

- A. invest in all industries in order to achieve balanced growth
- B. identify a economy's most binding constraints and the development policy must target the removal of such constraints
- C. identify industries that have income elastic demands for their products and undertake massive investments for the expansion of these industries
- D. attract foreign investment and technology for industrial expansion

**25) In the endogenous growth models of Lucas and Romer, an increase in a worker's level of human capital**

- A. increases both the amount of additional human capital she can produce and the amount of output she can produce.
- B. increases neither the amount of additional human capital she can produce nor the amount of output she can produce.
- C. increases the amount of additional human capital she can produce, but does not increase the amount of output she can produce.
- D. increases the amount of additional output she can produce, but does not increase the amount of human capital she can produce.

**26) Which of the following statements best describes the characteristics of accumulating physical capital and human capital?**

- A. Both physical capital accumulation and human capital accumulation are characterized by decreasing marginal returns.
- B. Neither physical capital accumulation nor human capital accumulation is characterized by decreasing marginal returns.
- C. Physical capital accumulation is subject to decreasing marginal returns, but human capital accumulation is not.
- D. Human capital accumulation is subject to decreasing marginal returns, but physical capital accumulation is not.

**27) According to critical alternative views, what is poverty?**

- A. A monetary and non-monetary condition where people lack access to community regulated common resources, opportunities and income.
- B. A monetary condition brought about by people's own laziness.
- C. A monetary condition where people do not have enough to satisfy basic needs.
- D. None of the above

**28) The hidden momentum of population growth is caused by**

- A. the demographic transition.
- B. children's contribution to income.
- C. population age structure.
- D. the opportunity cost of a woman's time.

**29) In Stage III of the demographic transition,**

- A. the birth rate is relatively high and the death rate is relatively low.
- B. the birth rate is relatively low and the death rate is relatively high.
- C. the birth rate and the death rate are relatively low.
- D. the birth rate and the death rate are relatively high.

**30) What conclusion can be reached from the following data on income shares?**

	<u>Percentage of Income Received by</u>	
	<u>Lowest 40%</u>	<u>Highest 20%</u>
Bangladesh	17.3	45.3
Indonesia	14.4	49.4

- A. Bangladesh has adopted a strategy of redistribution with growth
- B. growth in Bangladesh is calculated using poverty weights rather than income weights
- C. absolute poverty is more widespread in Bangladesh
- D. the size distribution of income is more unequal in Indonesia

**\*\*\*\*\* End of PART – A (CLOSED BOOK) \*\*\*\*\***

**Attempt PART-B (OPEN BOOK) in a separate Answer Sheet**

**COMPREHENSIVE EXAMINATION**  
**PART-B (OPEN BOOK) (25 MARKS)**

Note: Attempt all questions. Open Book examination. Write clearly assumptions, if any. **Answer to the point.** Underline or highlight your final answer. Please read the questions carefully before answering them and don't forget to answer all parts of each question at one place. You will be awarded marks on the quality of your explanations as well as the accuracy of your answers.

**This part has five questions with sub questions. Each question carries equal marks (5.0 Marks)**

B1)

- I. For each of the following statements, answer whether the statement is TRUE or FALSE. You must justify your answer. Merely stating TRUE or FALSE without adequate explanation will deserve no points.
- a) If two countries have the same growth rate in their per capita GDP between 1999 and 2000, then the population growth rate in the two countries between 1999 and 2000 must also be the same.
  - b) The Harris-Todaro model of rural-urban migration predicts that government wage subsidies for the urban formal sector alone can achieve the twin goals of eliminating urban unemployment and achieving an efficient allocation of labor.
- II. Compare and contrast the Big Push Theory and Kremer's O-Ring Theory of economic development in the context of developing nations.

B2) Consider a simple economy with only two sectors: urban and rural. Workers in the urban sector who do not obtain formal sector jobs are assumed to be able to obtain informal sector jobs. The wage in the informal sector is fixed at  $W_I = 10$ . There are 10 million workers in the economy and they are all identical and risk-neutral.

The following table represents the marginal product of labour ( $MP_L$ ) in the two sectors for various levels of employment:

<b>Workers (millions)</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Urban <math>MP_L</math></b>	50	45	40	35	30	25	20	15	10	5	0
<b>Rural <math>MP_L</math></b>	40	36	32	28	24	20	16	12	8	4	0

An economist has drawn a diagram with the number of workers in the urban sector on the horizontal axis, and plotted the marginal product labour of each sector on vertical axis. Based on this diagram, he estimated the number of workers and the marginal product in each sector in competitive migration equilibrium. The number of workers in the urban sector is approximately 5.5 million, leaving 4.5 million in the rural sector. The wage in this competitive migration equilibrium is approximately 22.

- a) Now suppose the formal sector wage is raised to  $W_F = 30$ . What would be the demand for workers in the formal sector? Starting from the situation given above, what would be an estimate of the probability of obtaining a formal sector job? Would workers start to migrate? Explain briefly.

- b) Compute the probability of obtaining a formal sector job, when the number of workers who have migrated to the urban sector is equal to 2, 3, 4, 5, 6, 7, 8 and 9 million respectively. Note that a probability cannot exceed 1.  
Use the above computed values and calculate the expected wage in the urban sector at each of these migration levels. On a new diagram, plot the expected urban wage from and the marginal product of labour in the rural sector from the table above.
- c) Estimate the numbers of workers in the informal urban sector and the rural sector in a Harris-Todaro migration equilibrium. What is the equilibrium wage in the rural sector? How many more workers migrate relative to the competitive equilibrium?

B3) Consider the economy of Liberia, which is just beginning to wake up from a long period of agricultural stagnation, with the construction of some new factories in the industrial sector. The economy has relied so far entirely on production of corn.

There are 100 identical families each farming their own lands. Each family has 10 family members who participate equally in the farm work and share in the resulting output. In each farm, the land area is small; it can employ upto five full time workers, each of whom produces one unit of corn each. Beyond five full-time workers, additional workers generate no additional farm output. Hence the corn output of each farm is the smaller of 5 and X, the number of people working full time on the farm.

Each new factory produces shirts, employing labor. The marginal product of labor in each factory is  $(15 - Y)$  shirts, which is decreasing in Y, the number of workers employed in the factory. Workers are free to move between the farm and industrial sector. There are no transport costs incurred by farm workers to go work in a factory.

Factories are owned by entrepreneurs who maximize profits. They save 10% of their profits and invest these to build new factories which start the following year. Each new factory requires a set up cost equivalent to 98 shirts.

Liberia trades freely with the rest of the world, and Liberia is small relative to the rest of the world's economy. Hence shirt and corn prices within Liberia are fixed, the price of corn relative to shirts is 2, independent of how much shirts or corn are produced in the country. Each shirt produced can thus be sold at a fixed price equivalent to  $0.5 = (1/2)$  units of corn

- a) In year 0 before the new factories arrive, when each farm has 10 family members working on it, what is the average product of labor (i.e., corn output per worker) in 1 each farm? What is the marginal product of labor (i.e., incremental corn output if one more worker were to be employed)? What proportion of the economy's labor force is surplus labor?
- b) In year 1, 30 new factories are created. Assume (as Lewis did) that wages in the agricultural sector are going to remain fixed at their value in year 0 until such time that labor scarcity emerges in farms (i.e., the marginal product of labor exceeds the historical wage). What will the wage rate in the industrial sector be (in units of shirts)? How many workers will each factory employ in year 1?
- c) Calculate the total employment in the industrial sector in year 1. Will there be surplus labor in agriculture in year 1?

- d) Calculate the profits per factory in year 1. (Hint: remember how to calculate the area of a triangle.)
- e) How many factories will there be in year 2? Will there be surplus labor in agriculture in year 2?
- f) Calculate GDP in Liberia in years 0, 1 and 2 respectively (in units of shirts). Describe in words the growth process experienced by Liberia during these years.

B4) Consider the Romer model. Output is produced using ideas and labour:  $Y = (A_t L_{yt})$ , where  $A$  is the total stock of “ideas” and  $L_Y$  is the total amount of labour employed in the production of output.

Ideas are generated using past ideas and labour:  $\Delta A_t = A_{t-1} - A_t = \bar{z} A_t L_{at}$ . Finally the total amount of labour available is given by  $\bar{N} = L_{at} + L_{yt}$ .

- a) Suppose that a constant fraction of labour  $\bar{l}$  is allocated to the technology sector. If  $\bar{N} = 2$ ,  $\bar{l} = (1/2)$  and  $\bar{z} = (1/4)$ , what is the growth rate of  $A_t$ ?
- b) Suppose that new research technology makes producing in ideas more productive so that  $\bar{z}' = 1/2$ . What happens to the growth rate of ideas in the economy?

**B5)**

- I. Write important four points explaining the fertility trends observed during the Second Stage of the Demographic Transition theory.
- II. Consider the following two different distributions of income schedules of Country X and Country Y:

	% share of population	% share of income
I	20	2
II	20	12
III	20	15
IV	20	30
V	20	41

Country X

	% share of population	% share of income
I	25	5
II	25	15
III	25	25
IV	25	55

Country Y

What is the Gini Coefficient for these countries? In which of the two countries the income distribution exhibits greater inequality? Comment on the result.

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