



Strathmore
UNIVERSITY

STRATHMORE INSTITUTE OF MATHEMATICAL SCIENCES
END OF SEMESTER EXAMINATIONS

BSE 4120: DEVELOPMENT ECONOMICS

DATE: Friday, 27th July 2018

TIME: 2 Hours

Instructions

Answer Question ONE and any other Two questions

Question One

- a) What are the traditional measures of development and how do they deviate from the modern definition of development economics? (7 marks)
- b) Assume a population is divided into quintiles according to rising income levels as shown in the equation below.

$$G = w_1g_1 + w_2g_2 + w_3g_3 + w_4g_4 + w_5g_5$$

where:

G = a weighted index of growth of social welfare,

g_i = the growth rate of income of the i^{th} quintile

the i quintiles are ordered 1, 2, 3, 4, and 5 and

w_i = is the “welfare weight” of the i^{th} quintile

($w_1 = 0.05$, $w_2 = 0.09$, $w_3 = 0.13$, $w_4 = 0.22$ and $w_5 = 0.51$)

(i) Taking note that weights add up to unity and are nonnegative, write the equation for the GNI-share weighted index of social welfare (denoted as G)? (3 Marks)

(ii) Now suppose that the income growth rate of the bottom 60% of the population is zero ($g_1 = g_2 = g_3 = 0$) while that of the top 40% is 10% ($g_4 = g_5 = 0.10$). Write the new equation for G . What is the value for G ? (2 Marks)

(iii) Based on your findings in b(i) and (ii) do you think any income increase will affect those with no income? Is GNI the best measure for welfare index of a society?

(4 marks)

- c) (i) What are the main tenets of the O-ring theory? (10 marks)

- (ii) Based on this theory are developing countries condemned to their developing status?
If Yes/No why? (4 marks)

Question two

- a) Before 2010 the living levels and capabilities in the various nations of the world were measured using the Human development index (HDI). What informed the revision of this index to the new human development index? (6 marks)
- b) Table 1 below gives the values of the various 2010 human development indicators for Kenya

Indicator	Value
Life expectancy	55.6
Mean years of schooling	7.0
Expected years of schooling	9.6
Per capita income (PPP\$)	1628

Given that the observed cut off points for the indicators are as follows:

Dimension	Observed Maximum	Observed Minimum
Life expectancy	83.2	20
Mean years of schooling	13.2	0
Expected years of schooling	20.6	0
Combined education index	0.951	0
Per capita income (PPP\$)	108,211	163

Calculate Kenya's:

- (i) Life expectancy index (2 marks)
- (ii) Mean years of schooling index (2 marks)
- (iii) Expected years of schooling index (2 marks)
- (iv) Education index (2 marks)
- (v) Income index (2 marks)
- (vi) NHDI (2 marks)
- c) Based on your calculations above where does Kenya rank in terms of the NHDI (2 marks)

Question 3

- a) There is on-going consensus that population growth is not a real problem to necessitate government intervention. What then are the real problems that both rich and poor nations face in the context of population growth and economic development? (10 marks)
- b) According to Rostow, the transition from underdevelopment to development can be described in terms of a series of steps or stages through which all countries must proceed. Clearly identify these stages and enumerate their characteristics (5 marks)
- c) Assuming that the stages are clearly delimited and must be followed by any nation to develop. Why aren't developing countries following these stages that led to the currently witnessed developed status of western Europe? (5 marks)

Question Four

- a) What are the linkages between investments in Health and Education as points of development. In your explanation justify how such health investments may raise the return on investments in education, and vice-versa? (10 marks)
- b) How does absolute poverty differ from income inequality and state the different measures for poverty and inequality? (10 marks)

Question Five

- a) Explain the paradox that Kenya and China are both classified as developing countries (2 marks)
- b) Social pillar is one of the 3 pillars of Vision 2030 Strategy Plan for the Kenyan government. Focusing on Education and Water Sectors, what are the challenges facing these sectors? Highlight 4 flagship projects that have been identified in these sectors? (18 Marks)