



STRATHMORE INSTITUTE MATHEMATICS (SIMS)  
BBS FINANCIAL ECONOMICS  
END OF SEMESTER EXAMINATION  
DEVELOPMENT ECONOMICS – BSE4120

**DATE: 11 August 2020**

**Time: 2 hours**

**INSTRUCTIONS**

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

**QUESTION 1 (30 MARKS)**

- a) Assume the following national income accounting data in PPP US. \$ and development indicators.

income earned on all foreign assets	1200
Income earned by foreigners in the country	2000
interest paid to businesses	650
contributions to Social Security	350
net personal transfer payments to foreigners	215
personal interest income	230
government purchases of goods and services	10,000
consumption expenditures	7,500
gross investment	8,000
imports of goods and services	2,000
exports of goods and services	1,000
Life expectancy at birth (years)	60
Mean years of schooling (years)	9
Expected years of schooling (years)	12
Population life expectancy (years)	60
Adult literacy (%)	45
Enrolment in school (%)	65
Population (numbers)	10

- i) Calculate the old HDI? 8 marks
- ii) Calculate the New HDI? 6 marks

- b) Barbados has a population of 20 individuals, their personal income is measured in money units as follows: 0.8, 2.5, 7.8, 0.9, 4.2, 9.2, 1.8, 4.0, 7.4, 1.5, 2.9, 6.7, 4.3, 2.5, 7.1, 2.8, 6.3, 5.1, 9.6, 12.6
- i) Compute the share of total income in quintiles and deciles (4 marks)
  - ii) How does Kuznet ratio measure income inequality (1 mark)
  - iii) Calculate the income inequality using Kuznets ratio (2 marks)
  - iv) Using the above data plot the Lorenz Curve (2 marks)
  - v) Given income allocation for 9 individuals is 17.8, for 6 individuals is 33.5 and for 5 individuals is 48.7. Calculate the mean income ( $\mu$ ) for all the individuals? (2 marks)
  - vi) Calculate the Gini-coefficient for question (v) above? (4 marks)  
(hint:  $G = \frac{1}{2\mu n^2} \sum_{j=k}^m \sum_{k=1}^m n_j n_k |y_j - y_k|$ )
  - vii) What does the Gini-coefficient calculated imply? (1 marks)

### QUESTION 2 (20 MARKS)

Sub-Saharan African Countries are considered under-developed because of several reasons. Among the key reasons is the coordination failure. Using appropriate illustrations and examples in any development country of your choice, discuss how under-development occurs through coordination failure and how it can be addressed on the basis on big bush theory. (20 Marks)

### QUESTION THREE (20 Marks)

Children born and raised in marginalized areas in Kenya face a number of challenges. Over time, most of these children are unable to access basic education and clean water for drinking. UNICEF with collaborations with Kenya government to resolve the situation. Using appropriate examples, discuss the problems in detail and provide strategies of how the two players can enhance development in the marginalized areas. (20 Marks)

### QUESTION FOUR (20 Marks)

Development is considered to be much broader than economic growth. In fact, Economist define development as “growth plus change”. Discuss (20 Marks)

### QUESTION FIVE (20 Marks)

Discuss the structure of population using an African country of your choice and explain how the country has managed to address poverty. (20 Marks)