

Name: \_\_\_\_\_ ID: \_\_\_\_\_

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani**  
**Pilani Campus**

**Course No:** GS F234

**Weightage & marks:** 25%, 50 marks

**Duration:** 90 minutes

**Course Title:** Development Economics

**Type of exam:** Closed book

**Date:** 15.03.2022

**Mid semester examination (Part A)**

**Section1: Very short answer questions**

**5 marks**

Q1. Fill in the blanks:

- a. Economists like Karl Marx and Fredrick Engels said that how “technology and resource availability like capital & labour” would influence production output will depend on \_\_\_\_\_ in the society.
- b. Population can affect the following aspects of resources in a society/economy:
1. \_\_\_\_\_
  2. \_\_\_\_\_
- c. An \_\_\_\_\_ curve is a concave line plotted on a graph, showing all of the various combinations of two inputs that result in the same amount of output.
- d. In conventional national accounting, goods and services produced in \_\_\_\_\_ are not counted in GDP.

Q2. Write True or False for each of the statements given below:

- a. Developing economies which started late could catch up with developed nations primarily due to successful \_\_\_\_\_ borrowing from developed nations.
- b. Neo-classical economists assumed the social subsystems to be fairly constant it and therefore a relevant to affecting the economics subsystem

Q3. An example of low value add activity in the context of economic growth is: \_\_\_\_\_

Q4. As economic growth and development, reach higher stages: \_\_\_\_\_ sector’s share in GDP reduces & \_\_\_\_\_ sector’s share in GDP increases.

Q5. Harrod and Domar assumed  $c$ , which is the ratio of \_\_\_\_\_ : \_\_\_\_\_ to be constant.

**Section 2: Short answer questions**

**5 marks**

Q1. Define any five of the following terms:

- a. Real GDP per capita
- b. Dutch disease
- c. Induced institutional innovation
- d. Natural rate of growth of population
- e. Subsistence wage
- f. Efficiency wage

**g. Intangible capital**


**Part B: Graph and numerical questions****20 marks**

To be answered on separate answer sheet provided.

Q1. Following is the data set for select countries for real GDP per capita.

**[5]**

Country	Real GDP per Capita, 1960	Real GDP per Capita, 2004
United States	\$12,892	\$36,098
United Kingdom	10,323	26,762
France	8,531	26,168
Ireland	5,294	28,957
Japan	4,509	24,661
Singapore	4,219	29,404
Hong Kong	3,322	29,642
South Korea	1,458	18,424

Q: a) Calculate the average annual growth rate for each country between the two given time periods using a simple averaging method.

Plot the data for real GDP per capita in 2004 (y-axis) with average annual growth rate (x-axis) on the given graph.

b) Then draw the best linear correlation line by your best estimate

c) Is there a high correlation or a low correlation between these two dimensions?

d) Provide evidence for your answer given in part c from the above data.

**Q2.** Draw a well-labelled graph to show Ricardo's explanation of how food prices increased as capitalists expand production. **[4]**

**Q3.** Draw a well-labelled graph to show how internal augmentation and external augmentation can affect changes in 'marginal product' in farming across time. Also show how technological improvements or beneficial changes in innovation possibility curve can affect these augmentations. **[4]**

**Q4.** Draw a well-labeled Solow Swan model and show the new capital formation by shading the relevant area in the graph. **[4]**

**Q5. Look at the graphical data below:**

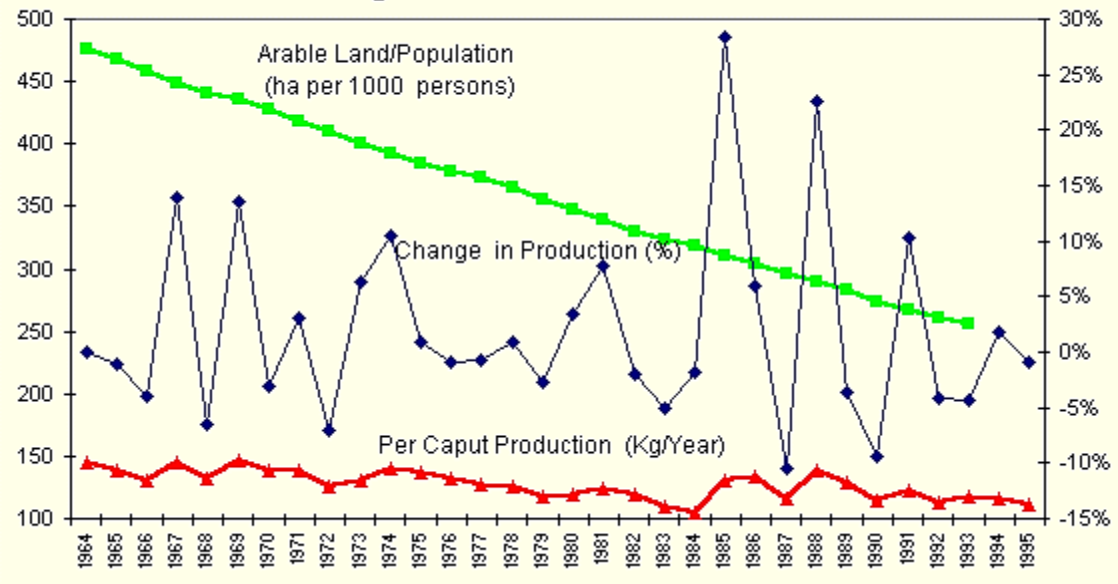
Despite the increase in production (measured in %), the food per capita availability still seems to a problem.

(a) Identify the three years when the percentage change in food production was highest.

(b) What could be the primary reason for problem in food per capita availability

(c) For a proposal where government is planning to invest 20 million African Francs in a project to improve irrigation, the return from project is 7.5 million African Francs each year for 3 years. The government uses a discount rate of 5%. Will the government okay the project? Show all calculations to support your answer.

**Figure 1 - Sub-Saharan Africa**



**Part C: Subjective questions**

**20 marks**

Important: Please adhere to word limit given for each answer.

**Q1.** What drives innovation in the context our understanding of how an innovation possibility curve is plotted with labour and land on y and x-axis respectively?  
 Explain in 3-4 steps (30-40 words) [3]

**Q2.** “Merchandise Exports consists of (primary + industrial) products. Evidence has shown often that countries where per capita natural resource endowments was low, showed higher share of industrial output in total merchandise exports.” How can this be explained? Provide your answer in 3-4 step explanation. [3]

**Q3.** How can external debt in developing economies make them better? [3]  
 How can external debt in developing economies make them worse?  
 Explain your answer in 25 to 30 words for each

**Q4.** Give a General form of Cobb Douglas production function. Clearly write the name of all notations used. What do alpha and beta refer to? [3]

**Q5.** (i) What is a growth accounting model? [3]  
 (ii) What is the role of technological developments, which is seen when one, applies the growth accounting model to understand economic growth for the past three to four decades?

**Q6.** State any three important aspects of the dual-sector model given by Karl Lewis [3]

**Q7.** According to Ricardo’s model, assuming  $W_s$  is available to all industrial workers, industrial supply of labour is perfectly elastic, then what are its impact on the marginal productivity of agricultural land and the corresponding marginal cost of food production? [3]

**End \*\*\*\*\***