

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
SECOND SEMESTER 2021-2022
Comprehensive Exam-Part A, Part B and Part C
Part A-(Closed Book)

Course No. : **ECON F244**
 Course Title : **Economic of Growth and Development**
 Date : **10/5/2022**
 Time : **08.00 AM – 11.00 AM**

Max. Marks : **15.00**
 Total Duration : **180 mints**
 Weightage : **35%**

Name: _____ ID: _____

Instructions:

- All questions are compulsory and there is **no negative marking** for the wrong answers.
- No separate sheet will be provided for the rough work
- Use of pencil is not allowed
- Write the correct option in (**CAPITAL LETTER**) in the space provided. Failing to do so will result in zero marks.

Q.No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Opt.															

- Q1. Arrange the following Rostow's stages of economic growth in their proper sequence: I, Traditional society; II. Take-off stage; III. Age of mass consumption; IV. Drive to maturity
- A. I, II, IV, III
 B. I, II, III, IV
 C. II, I, IV, III
 D. II, I, III, IV
- Q2. The incremental capital-output ratio (ICOR) refers to the:
- A. Ratio of investment to change in output
 B. Ratio of capital stock to the total output
 C. Marginal productivity of capital
 D. Relationship between investment that is financed by the citizens of a country and the income enjoyed by them
- Q3. The Multidimensional Poverty Index has been developed by
- A. The UNDP
 B. Oxford HDI
 C. The UNO
 D. All of the above
- Q4. The Romer model falls into a class of growth models in which the key determinants of economic growth are:
- A. Implicit in the model
 B. Explicit in the model
 C. Exogenously determined
 D. All of the above
- Q5. The most important role of the World Trade Organization is
- (A) to promote market oriented economic policies.
 (B) to settle trade disputes.
 (C) to provide development assistance.
 (D) to help countries choose the appropriate level of a tariff or quota.
- Q6. A major cause of environmental degradation in developing countries is

- (a) population growth
- (b) rural poverty.
- (c) rapid urbanization.
- (d) all of the above.

Q7. For a Harrod type economy at full employment level, the rate of growth of capital and labor is 6 and 5 percent respectively. What would be the level of economic growth?

- a) 6
- b) 5
- c) 30
- d) 11

Q8. For a well behaved intensive production function, the slope of a tangent at any point on the per worker production function represent:

- a) Marginal product of capital
- b) Marginal product of labor
- c) Output per worker
- d) None of these

Q9. Which of the following are components of economic growth?

- a) growth in labor force
- b) technological progress
- c) investment
- d) all of the above

Q10. **Which of following statement is true about the Economic Growth**

- A. It refers to increase in Gross Domestic Product (GDP)
- B. It refers to the long and sustained rise in real Gross Domestic Product (GDP)
- C. It is characterized by fall in unemployment rate
- D. Rise in GDP on monetary term

Q11. Assume that Marginal Propensity to consume is 0.2 and Marginal Propensity to Import is 0.1. what is foreign trade multiplier?

- A. 2.90
- B. 2.98
- C. 3.34
- D. 4.50

Q12. When Lorenz function $f(x) = x^{3.3}$, find Gini coefficient?

- A. 56.18
- B. 53.48
- C. 23.18
- D. 11.11

Q13. In case of perfect equality, value of Gini coefficient will be

- A. 0
- B. 1
- C. 0.5
- D. Infinity

Q14. Which is of the following is incorrect about Harrod-Domar (H-D) model of growth.

- A. H-D model is applicable in capital advanced country
- B. H-D model based on fixed capital output ratio
- C. Labour and capital are perfectly substitutable
- D. Capital is only factor of production

Q15. A period of rapid population growth between a per-industrial, stable population characterized by high birth and death rates and a later, modern, stable population marked by low fertility and mortality is known as

- A. Population maturity
- B. Demobilizing population
- C. Demographic transition
- D. Birth-death rate transformation

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
SECOND SEMESTER 2021-2022
Comprehensive Exam (Closed Book)
Part B

Course No. : ECON F244
Course Title : Economic of Growth and Development
Date : 10/5/2022
Time : 08.00 AM – 11.00 AM

Max. Marks : 40.00
Total Duration : 180 mints
Weightage : 35%

Instructions:

- Answer all the questions and it should be precise and complete.
- Start each question on a fresh page.

Q1. Consider an economy that has access to a production technology under Solow growth model

$Y = K^\alpha L^{1-\alpha}$, with $\alpha \in (0, 1)$, where the savings rate is exogenously given and equals s , the population grows at a constant rate n , there is no technology progress ($g = 0$) and the depreciation rate δ is 0. Also, assume that everybody is employed, thus population equals employment. **[10]**

- (a) Write down an equation for \dot{Y} and \dot{K} . Define $k \equiv K/L$ and derive an expression for \dot{k} (small k dot) as a function of n , s and $y \equiv Y/L$.
- (b) Using the same definition of long run equilibrium covered in lectures, find the long run equilibrium values for the capital per capita (k), and the product per capita (y). What is the growth rate of product per capita in the long run?
- (c) Write down an expression for consumption per capita ($c \equiv C/L$) in the long run as a function of n and k^* .
- (d) Suppose that this economy starts with a savings rate different than the one required to achieve the maximum consumption per capita in the long run (i.e. one that leads to $k^* \neq k^{\text{gold}}$). One politician discovers this and claims that the government should try to correct it and move the savings rate towards the value that maximizes consumption. If the government cares only about people who is alive now, should they implement this policy? Be careful with your argument.

Q2. Explain the traditional measure of Human Development Index (HDI) and how it is different from the new HDI proposed by UNDP in November 2010. Also shows the relationship between HDI and economic growth in India? [10]

Q3. What is foreign trade multiplier and discuss the role of foreign trade and investment in India's economic transformation? [5]

Q4. In an economy, 80% of the people have annual earnings of \$25,000 and 20% of the people earnings of \$150,000. Assume the economy has 10 people. What is the Gini coefficient? [5]

Q5. Critically explain the Rostow's stages of economic development. [5]

Q6. After you graduate from BITS Pilani, you start your new job as a consultant at Goldman Sachs, where your boss asks your advice on which growth model to use for understanding the determinants of India's economic growth since the 1990s. justify your answer briefly. [5]

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BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
SECOND SEMESTER 2021-2022
Comprehensive Exam (Open Book)
Part C

Course No. : **ECON F244**
Course Title : **Economic of Growth and Development**
Date : **10/5/2022**
Time : **08.00 AM – 11.00 AM**

Max. Marks : **15.00**
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Q7. India is projected to surpass China as the world's most populous country by 2027. Discuss the challenges of rising population and suggest a way forward. [7.5]

Q8. Is it possible to strike a balance between developmental imperatives of a growing economy like India and the limits to growth imposed by environmental degradation? Critically analyse. [7.5]

*****END*****