

Indian Statistical Institute, Bangalore  
B. Math (Hons.) Third Year  
Second Semester - Economics II

Midterm Exam  
Maximum marks: 40

Date: February 28, 2019  
Duration: 2 hours

**One Mark Questions**

**Note down the alphabet of the correct answer**

1. Solow's neoclassical growth model exhibits diminishing returns to labour and capital separately and diminishing returns to scale.

- a. True            b. False

2. The Arthur Lewis model of economic growth assumes that

- a. An unlimited supply of labour is available at a fixed wage rate  
b. Supply of labour is an increasing function of wage rate  
c. Supply of labour is a decreasing function of wage rate  
d. There is lack of supply of labour from agricultural sector

3. The concept of Purchasing Power Parity is based on

- a. net factor income from abroad  
b. cost of the same market basket of goods in different countries  
c. market exchange rate between countries  
d. income per capita in different countries

4. Dependency ratio is the ratio of

- a. Total investment to Gross National Product of the economy  
b. Female workers to male workers in the labour force  
c. Foreign aid to total Gross National Product of the economy  
d. Non-working age group population to working age population

5. Gross National Income is

- a. The total domestic output plus the factor incomes accruing to residents from abroad  
b. The total output produced in the country  
c. Total output of a country divided by its population  
d. Standard of living that yields more than the basic necessities of life

6. In theory of economic growth, divergence is

- a. The tendency for per capita income to grow faster in lower income countries than higher income countries
- b. The tendency for per capita income to grow faster in higher income countries than lower income countries
- c. The tendency for per capita income of higher and lower income countries to grow at the same rate
- d. The tendency for manufacturing sector to grow at the same rate in high and low income countries

7. In the Solow model which uses Cob Douglas production function,  $y=AK^\alpha$ , A stands for

- a. Capital
- b. Labour
- c. Productivity of labour
- d. Elasticity of capital

8. In the neoclassical school of thought, the free market analysis argues that an unregulated market performs better than the one with government intervention.

- a. True
- b. False

9. According to the Harrod-Domar model, an increase in growth rates depends on

- a. Increase in capital-output ratio
- b. Decrease in capital-output ratio
- c. Increase in marginal propensity to consume
- d. None of the above

10. This is not a core value of new economic view of development

- a. Sustenance
- b. Self esteem
- c. Freedom
- d. Rapid capital accumulation

11. Neutral technological progress occurs when

- a. Higher output levels are achieved with the same quantity and combinations of factor inputs
- b. Higher output levels are achieved by more capital intensive methods
- c. Higher output levels are achieved by more labour intensive methods
- d. There is no change in the level of output

12. Subsistence economy is an economy in which production is mainly for personal consumption and the standards of living yields little more than basic necessities of life – food, shelter and clothing.

- a. True
- b. False

13. According to the structural development school of thought, which of the following tends to occur as a country develops?

- a. A decline in trade as a share of GNP
- b. An increase in the percentage of income spent on luxurious goods
- c. Growth of the rural sector
- d. A shift of contribution to national income from agriculture to industry and services

14. In the public choice (or new political economy) approach to development the emphasis is on

- a. Growth in the rural sector.
- b. The self-interested behaviour of public officials.
- c. The dependence of less developed countries on former colonial powers.
- d. The inherent efficiency of developing country markets.

15. The linear stages theory of economic growth fails to recognize that increased investment is

- a. Both a necessary and a sufficient condition
- b. A sufficient but not a necessary condition
- c. A necessary but not a sufficient condition
- d. Neither a necessary nor a sufficient condition

16. When the quality of skills of labour force are improved by the use of electronic communication media, it is

- a. Capital augmenting technological progress
- b. Labour augmenting technological progress
- c. Capital saving technological progress
- d. Neutral technological progress

17. According to the Lewis growth model industry faces an elastic supply curve of labour because the marginal product of labour in agriculture is

- a. Higher than its marginal product in industry
- b. Higher than the average product in agriculture
- c. Zero
- d. Equal to the average product in agriculture

18. According to Sen, 'entitlement' refers to

- a. Utility of the commodities they possess or control
- b. The feeling of worthiness that a society enjoys
- c. The freedom that people have given their personal features and command over commodities
- d. Set of alternative commodity bundles that a person can command using totality of rights he/she faces

19. Terms of trade is

- a. The ratio of country's average import price to its average export price
- b. The ratio of country's average export price to its average import price
- c. The ratio of country's labour income to capital income
- d. The ratio of country's capital income to labour income

20. Nobel laureate Douglas North defined economic institutions as the 'rules of the game' of economic life as they are the constraints that shape formal and informal interactions in an economy.

- a. True
- b. False

### Two Mark Questions

1. A less developed country has capital output ratio of 5 and savings rate = 15%. If current GDP is \$1000, what will its GDP be next year?

2. According to Sen "the expansion of commodity productions are valued ultimately not for their own sake, but as means to human welfare and freedom." Using this statement explain the concept of 'functionings'.

3. State any two Millennium Development Goals (MDG).

4. The table shows the relationship between employment and share of GDP (in per cent) in agriculture, industry and services for selected developing and developed countries in the 2004-2008 period. Explain it using the data provided.

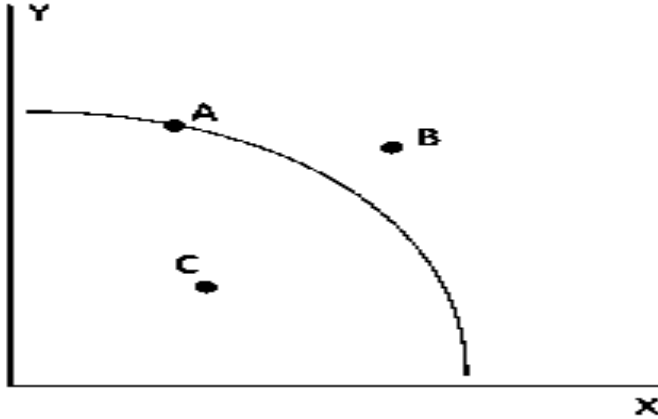
|                | Agriculture |     | Industry   |     | Services   |     |
|----------------|-------------|-----|------------|-----|------------|-----|
|                | Employment  | GDP | Employment | GDP | Employment | GDP |
| Philippines    | 44          | 15  | 18         | 32  | 39         | 53  |
| United Kingdom | 2           | 1   | 30         | 22  | 68         | 77  |

5. Mention the stages of growth model of development according to Walt W Rostow.

### Three Mark Questions

1. Assume that there are only two goods, radios and rice produced in the economy. Rice can be shown on X axis and radios on Y axis on the production possibility frontier.

- What do the points A, B, C indicate?
- If there is doubling of total resources in the economy how does the production possibility frontier shift?
- Invention of transistors had a huge impact on production of radios. Show the effect of this technological change on the production possibility frontier.



2. The table below shows the components of the New Human Development Index along with the actual values of 2013 for a few selected countries. Compute the new human development index for United States and interpret the new HDI value:

| Countries     | Life expectancy at birth (years) | Mean years of schooling (adults) | Expected years of schooling (children) | GNI per capita (PPP \$) |
|---------------|----------------------------------|----------------------------------|--|-------------------------|
| Brazil        | 73.8                             | 7.2                              | 14.2                                   | 10,152                  |
| Kenya         | 57.7                             | 7                                | 11.1                                   | 1,541                   |
| South Africa  | 53.4                             | 6.7                              | 10.6                                   | 9,594                   |
| United States | 78.7                             | 13.3                             | 16.8                                   | 43,480                  |
| Ghana         | 64.6                             | 7                                | 11.4                                   | 1,684                   |
| Canada        | 81.1                             | 12.3                             | 15.1                                   | 35,369                  |

*Source:* Human Development Report (2013)

### Four Mark question

1. Below is the diagram showing Solow growth model.

- Give the Solow equation.
- Show the steady state in the diagram.
- If we increase the rate of savings, show the change in steady state.

