Indian Statistical Institute, Bangalore

B. Math (Hons.) Third Year

Economics II: Themes in Development Theory and Policy

End-semester Exam

Maximum marks: 50

Date: April 29, 2024 Duration: 3 hours

Part I: Attempt all. 1 mark each.

- 1. State the Pigou Dalton Principle, with an example.
- 2. The process of demographic transition follows which of the following sequences:
 - a. Fast growing population; high fertility and high death rates; low fertility and high death rates
 - b. Stable or slow growing population; high fertility rate and low death rate; low fertility and low death rates
 - c. Slow growing population, high fertility and slow death rates, high fertility and low death rates
- 3. Localisation economies mean:
 - a. External economies of scale.
 - b. Positive externalities associated with the growth of a concentrated geographic region.
 - c. Agglomeration effects captured by particular sectors of the economy as they grow within an area.
 - d. None of the above.
- 4. Because a borrower has _____, formal banking institutions require collateral.
 - a. Risk-loving attitude.
 - b. Tendency to use productive loans for consumption purposes.
 - c. Limited liability.
 - d. Both a and c.
- 5. Which of the following features is commonly considered an essential component of sustainable development?
 - a. Intergenerational equity
 - b. Increasing Consumption expenditure
 - c. Intergenerational inequity
 - d. Increased level of saving
- 6. Give one difference between development banks and microfinance institutions.
- 7. Describe two features of the Green Revolution in India.
- 8. Differentiate between direct and indirect taxes, with an example each.
- 9. What is the inverted U hypothesis of Kuznets?
- 10. What is the scale of poverty in India today?

Part II: Attempt any 8 questions, 3 marks each

- 1. Define the Foster-Greer-Thorbecke (FGT) Index. Solve the following numerical example: Consider a 10-person economy with a poverty line of 2, and the income distribution of the 10 people is (1.5, 2, 2.5, 0.8, 3, 3.5, 8, 7.5, 3 and 6). The headcount ratio is 2. Using these numbers, find the P₂level of poverty.
- 2. Addressing the educational gender gap has been a key part of the Millennium Development Goals. What are three reasons that make reducing the gap economically desirable?
- 3. State and explain any three negative consequences of population growth.
- 4. State any three functions of a central bank.
- 5. Differentiate between Latin American and Indian agriculture systems.
- 6. What are the roles women play in agriculture?
- 7. Explain with a graph how a poor family is better off with a ban on child labour.
- 8. What is meant by market failures? Give two examples of market failures that financial liberalisation cannot address.
- 9. What are common property resources; what economic incentive problems do they face; and how have some communities successfully overcome these problems.
- 10. Why are primary cities generally the capital city often disproportionately large in many developing countries? Which policies can address this?

Part III – Answer any 4 questions, 4 marks each.

- 1. Describe the Malthusian population trap. What is the impact of technological and social progress on the population trap? Explain with a diagram.
- 2. What have been the main policies of poverty alleviation in India?
- 3. What is the Harris-Todaro migration model? Explain with a diagram.
- 4. What is meant by financial repression, financial liberalisation, currency substitution and unorganised money markets, and how do they relate to financial policy in developing countries?
- 5. From Table attached (Table 5.6), what do the variables MPI, percent poor and poverty intensity indicate? Take two countries and compare their indices from the data in the table.

TABLE 5.6 Multidimensional Poverty Index, Data for 2007–2011					
Country and Survey Year	MPI	Percent Poor	Thousands Poor	Poverty Intensity (A)	
Bangladesh 2007 (D)	0.292	57.8	83,207	50.4	
Brazil 2006 (N)	0.011	2.7	5.075	39.3	
Burundi 2005 (M)	0.530	84.5	6,128	62.7	
Bolivia, PS 2008 (D)	0.089	20.5	1.972	43.7	
Burkina Faso 2010 (D)	0.535	84.0	13.834	63.7	
Cambodia 2010 (D)	0.212	45.9	6.415	46.1	
Colombia 2010 (D)	0.022	5.4	2,500	40.9	
Congo, DR 2010 (M)	0.392	74.0	48,815	53.0	
Côte d'Ivoire 2005 (D)	0.353	61.5	11.083	57.4	
Dominican Republic 2007 (D)	0.018	4.6	439	39.4	
Feynt 2008 (D)	0.024	6.0	4,699	40.7	
Ethiopia 2011 (D)	0.564	87.3	72.415	64.6	
Ghana 2008 (D)	0 144	31.2	7 258	46.2	
Guinea 2005 (D)	0.506	82.5	7 459	61.3	
Haiti 2005/2006 (D)	0.299	56.4	5 346	53.0	
Honduras 2005/2006 (D)	0.159	32.5	2,281	48.9	
India 2005/2006 (D)	0.283	53 7	612 203	52.7	
Indonesia 2007 (D)	0.095	20.8	48 352	45.9	
Kenya 2008/2009 (D)	0 229	47.8	18 863	48.0	
Lao PRD 2006 (M)	0.267	47.2	2 757	56.5	
Liberia 2007 (D)	0.485	83.0	3 218	57.7	
Mali 2006 (D)	0.558	86.6	11 771	64.4	
Mexico 2006 (N)	0.015	40	4 313	38.9	
Madagascar 2008/2009 (D)	0.357	66.9	13 463	53.3	
Malawi 2010 (D)	0.334	667	0 633	50.1	
Mozambique 2000 (D)	0.512	70.3	18 127	64.6	
Nonal 2011 (D)	0.217	14.2	13 242	40.0	
Niger 2006 (D)	0.642	07.4	12 /27	60 4	
Nigoria 2008 (D)	0.310	54.1	82 578	57.3	
Pakistan 2006 (2007 (D)	0.264 d	10 A 0	81 236 d	53 4 4	
Part 2008 (D)	0.066	15.7	1 1230 0	42.2	
Dhilipping 2008 (D)	0.000	13.7	12 082	42.2	
Puranda 2010 (D)	0.004	60.0	6 000	50.8	
Senaral 2010 (D)	0.330	74.4	7 642	58.0	
Sierra Loope 2008 (D)	0.439	77.0	1,042	57.0	
South Africa 2008 (N)	0.439	12.4	4,521	42.2	
Taozaola 2010 (D)	0.037	15.4	28 552	42.5	
Timor Losto 2000/2010 (D)	0.552	03.0	20,332	52.0	
Handa 2011 (D)	0.300	60.0	24 122	52.9	
Vistorm 2010/2011 (JA	0.307	09.9	24,122	34.3	
Vietnam 2010/2011 (M)	0.017	4.2	3,090	52.0	
remen 2006 (M)	0.283	34.3	11,1/6	53.9	

Key: D indicates data are from Demographic and Health Surveys, M indicates data are from Multiple Indicator Cluster Surveys, d indicates lower bound estimate, and N indicates data are from national surveys. Not all indicators were available for all countries; caution should thus be used in cross-country comparisons. Where data are missing, indicator weights are adjusted to total 100%.

Source: UNDP, Human Development Report, 2013, pp. 160-161.

6. The Tables below show the extent of household income, in two villages A and B. On the basis of your understanding of the data provided, answer the following questions.

Description	Α	В
Mean	96,418	85,579
Median	50,026	42,120
Minimum	1,710	-16,818
Maximum	54,54,103	1,19,46,078
Total number of households	350	1205

Table 1 Descriptive statistics of total household income, study villages, in rupees

Table 2 Distribution of total household income, by income decile, study villages, in per cent

Income	Share in household	Share in total household	Share in total household
decile	number	income in A	income in B
Poorest	10	2	1
2	10	3	2
3	10	4	3
4	10	5	4
5	10	6	4
6	10	6	7
7	10	7	7
8	10	10	9
9	10	12	12
Richest	10	46	51
Total	100	100	100

Income decile	Other Caste	Extreme Backward	Backward Caste	Scheduled caste (SC)
	Hindu	Caste		
Poorest	7	4	9	18
2	4	8	17	15
3	3	11	15	12
4	5	13	10	12
5	6	14	5	10
6	10	13	0	11
7	8	9	17	11
8	12	13	17	4
9	13	15	4	5
Richest	31	2	5	2
Total	100	100	100	100

Table 3 Distribution of households, by caste, by per capita income decile in village B

i. Which village has higher income inequality? Substantiate.

ii. How does the income distribution vary according to caste/social groups in village B?

iii. If you had to be a randomly selected person in a village, which village would you prefer to be in?