Indian Statistical Institute, Bangalore B. Math (Hons.) III year Economics III

Mid-Semester paper	Duration: 3 hours	Total marks: 40	Date: 17th Feb 2017
Part I: Compulsory			
1.			[10 Marks]
(a) What is the transfer axiom?			
(b) How does strong transfer ax	tiom differ from (a)?		
(c) Which measure satisfies a ar	nd b?		
(d) Give one demerit of the Hea	nd count ratio.		
(e) Which Poverty measure can	be used to examine po	overty among subgrou	ps of the population?
2.		[3 +	3 + 3 + 1 grace = 10 Marks]
(a) What is the Consumer Price Index to measure rural poverty	Index for Agricultura ?	l Labour? Is it better th	an the Wholesale Price
(b) Give one way to measure ch	ronic poverty.		
(c) How does the Tendulkar po	verty line differ from t	he earlier official pove	rty line?
Part II Answer any four questi	ons. Each carries 5 ma	ırks.	
1. If data on permanent income variable/indicator to measure lo	are not available, in li ong term poverty.	ght of Anand and Harr	is, suggest a
2. Transitory poor are poor only	y for one year. Comme	ent.	
3. Is the official poverty line in I	India an absolute or re	lative poverty line? Exp	plain.
4. The Expert Group (Lakdawal India. Explain the method used	a) used consumption in brief.	expenditure data to ide	entify the poverty line in
5. Why is purchasing power par	rity used for internatio	onal poverty comparise	ons?
Or			
Does one dollar a day really ref	lect the same poverty	in different countries?	
6. Give two weaknesses of the r	nethod used to identif	y below poverty line p	opulation in India.
7. With information in the attac data is Recent Trends in Povert	hed Table 1, give two y and Inequality, Him	features of poverty in ı anshu, EPW, Feb 10, 20	urban India. Source of 107.

8. Give two features of global poverty based on the attached Table from Chen and Ravallion.

Table 1. Percentage of the population	on living be	low \$1.08 a	a day at 199	3 PPP by re	aion				1
Region	1981	1984	1987	1990	1993	1996	1999	2002	2004
East Asia and Pacific (EAP)	57.73	39.02	28.23	29.84	25.23	16 14	15 46	12.22	2004
Of which China is	63.76	41.02	28.64	32.98	28.36	17.37	17.77	12.33	9.05
	0.70	0.51	0.35	0.46	3.60	4.42	3.78	1.27	0.94
Middle East and North Africa (MALA)	10.77	13.07	12.09	10.19	8.42	8.87	9.66	9.09	8.64
South Asia (SAS)	5.08	3.82	3.09	2.33	1.87	1.69	2.08	1.69	1.47
Of which India is	49.57	45.43	45.11	43.04	36.87	36.06	34.92	33.56	30.84
SSA	21.75	47.94	46.15	44.31	41.82	39.94	37.66	36.03	34.33
Total	42.20	40.20	47.22	46.73	45.47	47.72	45.77	42.63	41.10
Total excluding China	31 35	20.60	28.72	28.66	25.56	22.66	22.10	20.13	18.09
		25.05	20.75	27.14	24.58	24.45	23.54	22.19	20.70

Source: authors' calculations. The set of countries are the Part 2 member countries of the World Bank, essentially all low- and middle-income countries, which the Bank currently defines as having average gross domestic product per capita for the period 2004–2006 of no more than \$11,115; see ref. 10.

Table 1: Comparable Estimates of Poverty and Inequality (URP, Official Poverty Lines) (Per cent)

Table 2: Comparable Estimates of Poverty and Inequality (URP, Official Poverty Lines) (Per cent)

										and the second s			in the second second					
C		1000	Headcount Ratio Pove			overty Gap			1	Headcount Ratio				Poverty Gan				
	Hurai	1983	1987-	1993	- 2004-	1983	1987-	1993-	2004-	(Urban)	1983	1987-	1993-	2004-	1983	1087.	1002	2004
			88	94	05		88	94	05			88	94	05	1305	00	1993-	2004-
	Andhra Bradoah	00 0	01.0	15.0	10.0									00		00	94	05
	Apenm	20.0	21.0	15.9	10.8	5.86	4.35	2.9	2.0	Andhra Pradesh	41.2	41.1	38.8	27.1	10.9	10.6	93	61
	Ibarkhand	44.0	39.4	45.2	21.7	8.75	7.45	8.3	3.5	Assam	25.9	11.3	7.9	3.7	5.6	1.5	0.9	0.5
	Bibar	64.7	52.8	62.3	42.9	22.00	13.56	16.2	8.9	Jharkhand	40.5	34.6	26.5	20.7	10.9	7.8	5.2	47
	Gularat	29.0	04.2	56.6	42.2	19.54	12.74	14.2	8.3	Bihar	61.6	63.8	40.7	38.1	18.5	16.6	9.7	93
	Hanyana	20.9	20.3	22.2	19.4	5.64	5.44	4.1	3.4	Gujarat	41.9	38.5	28.3	14.2	9.7	8.2	6.2	2.5
	Himaobal Bradach	21.9	15.3	28.3	13.6	4.28	3.62	5.6	2.2	Haryana	26.4	18.4	16.5	15.6	5.8	3.6	3.0	3.2
	Karnataka	17.0	16.7	30.4	10.9	3.58	2.63	5.6	1.5	Himachal Pradesh	11.0	7.2	9.3	5.0	2.8	0.7	1 2	1.0
	Karala	30.3	32.6	30.1	20.0	9.73	7.88	6.3	2.7	Karnataka	43.6	49.2	39.9	33.3	13.3	14 1	11 4	8.0
	Chhattlegarh	39.0	29.3	25.4	13.2	9.98	6.30	5.6	2.8	Kerala	48.0	38.7	24.3	20.6	14.7	10.0	5.5	47
	Madhya Bradeah	50.6	46.7	44.4	42.0	12.49	10.38	8.6	9.4	Chhattisgarh	50.7	36.0	44.2	40.7	14.5	9.8	. 11.5	12.0
	Madnya Pradesh	49.0	40.1	39.2	35.8	13.95	10.64	9.8	7.8	Madhya Pradesh	56.1	50.0	49.0	42.3	16.1	14.5	13.0	12.9
	Manarashtra	45.9	40.9	37.9	30.0	11.95	9.56	9.3	6.4	Maharashtra	41.1	40.5	35.0	32.8	12 1	12 4	10.9	12.4
	Dueleh	68.5	58.7	49.8	46.9	22.72	16.30	12.0	12.1	Orissa	54.0	42.6	40.6	43 7	16.7	14 4	11.4	9.2
	Punjab	14.3	12.8	11.7	10.0	3.03	1.97	1.9	1.3	Punjab	22.9	13.7	10.9	5.0	5.0	2.2	11.4	14.1
	Hajasinan	35.0	33.3	26.4	19.0	9.65	8.64	5.2	2.9	Rajasthan	41.2	37.9	31.0	28.5	11 5	2.3	1./	0.6
	Tamii Nadu	54.8	46.3	32.9	22.7	17.39	12.65	7.3	3.7	Tamil Nadu	51.9	40.2	39.9	24 1	15.4	9.0	10.0	6.2
	Uttaranchal	25.2	13.2	24.8	14.9	4.00	1.99	4.4	1.9	Uttaranchal	22.4	20.4	127	17.0	5.0	11.5	10.2	5.3
	Uttar Pradesh	47.8	43.3	43.1	33.9	12.70	10.25	10.6	6.7	Uttar Pradesh	52.7	46.4	36 1	30.7	15 1	4.2	3.2	3.0
	west Bengal	63.6	48.8	41.2	28.5	21.06	11.58	8.3	5.4	West Bengal	33.5	33 7	22.9	15 4	9.5	7.4	9.3	7.2
	All India	46.5	39.0	37.2	28.7)	12.36	9.29	8.5	5.8	All India	43.6	38.7	32.6	25.0 5	11 4	10.0	4.5	2.6
Shuarad Davatu Car											-			20.0	11.4	10.2	0.0	0.2
	Bural	1983 1987- 1992 2004 1000 1007								Squared Poverty Gap Gini								
	. i di di	1000	00	1993-	2004-	1983	1987-	1993-	2004-	Urban	1983	1987-	1993-	2004-	1983	1987-	1993-	2004-
			00	94	05		88	94	05			88	94	05		88	94	05
	Andhra Pradesh	2.00	1.41	0.87	0.65	29.7	30.0	20.0	20.4	Andhan David - 1								
	Assam	2.63	2.04	2.21	0.90	20.0	23.0	17.0	10.0	Anonra Pradesh	4.1	3.9	3.2	1.9	33.2	36.1	32.3	37.6
	Jharkhand	9.8	5.03	5.59	2 55	27.0	20.0	00.4	19.9	Assam	1.7	0.3	0.2	0.1	26.1	31.0	29.0	32.1
	Blhar	7.86	4.32	49	2.30	25.0	20.0	20.4	22.7	Jnarkhand	4.2	2.6	1.6	1.5	30.9	32.1	32.5	35.5
	Gujarat	1.69	1.59	1 16	0.91	26.8	20.2	22.2	20.7	Binar	7.1	5.9	3.4	3.0	28.5	26.6	28.2	33.3
	Haryana	1.37	1.30	1 75	0.61	20.0	20.1	24.0	21.3	Gujarat	3.6	2.6	2.0	0.7	28.5	27.8	29.1	31.0
	Himachal Pradesh	1.16	0.71	1.62	0.35	20.5	23.2	31.4	34.0	Haryana	1.9	1.1	0.9	1.0	34.8	28.7	28.4	36.5
	Karnataka	3.69	2.80	2 01	0.63	30.8	20.7	20.4	31.1	Himachal Pradesh	1.1	0.1	0.3	0.3	35.8	29.2	46.2	32.6
	Kerala	3.62	2.05	1.85	0.00	32.0	23.1	27.0	20.5	Karnataka	5.5	5.7	4.4	3.1	34.2	34.0	31.9	36.8
	Chhattisgarh		0.00	1.00	0.00	04.4	04 5	30.1	38.3	Kerala	6.2	3.9	1.9	1.6	38.9	36.9	34.3	41.0
	omanoquin	4.47	3.36	2 47	3 43	20 0			298									44 0
	Madhya Pradesh	4.47 5.54	3.36	2.47	3.43	24.4	24.5	21.7	00.0	Chhattisgam	5.6	3.6	4.1	5.4	32.2	32.1	30.6	
	Madhya Pradesh Maharashtra	4.47 5.54 4.3	3.36 3.97 3.21	2.47 3.58 3.35	3.43 2.31	24.4 31.5 29.1	30.6	30.0	26.8	Madhya Pradesh	5.6 6.2	3.6 5.6	4.1 5.3	5.4 4.8	32.2 29.8	32.1 33.3	30.6 33.6	39.7
	Madhya Pradesh Maharashtra Orissa	4.47 5.54 4.3 10.17	3.36 3.97 3.21 6.24	2.47 3.58 3.35 4.07	3.43 2.31 1.99 4.24	24.4 31.5 29.1	30.6 31.2	30.0 30.7	26.8 31.2	Madhya Pradesh Maharashtra	5.6 6.2 4.9	3.6 5.6 5.2	4.1 5.3 4.2	5.4 4.8 3.5	32.2 29.8 34.6	32.1 33.3 34.8	30.6 33.6 35.7	39.7 37.8
	Madhya Pradesh Maharashtra Orissa Punjab	4.47 5.54 4.3 10.17 1.06	3.36 3.97 3.21 6.24 0.51	2.47 3.58 3.35 4.07 0.48	3.43 2.31 1.99 4.24	24.4 31.5 29.1 27.0	24.5 30.6 31.2 26.9	30.0 30.7 24.6	26.8 31.2 28.5	Madhya Pradesh Maharashtra Orissa	5.6 6.2 4.9 7.1	3.6 5.6 5.2 4.2	4.1 5.3 4.2 4.3	5.4 4.8 3.5 5.8	32.2 29.8 34.6 29.0	32.1 33.3 34.8 31.0	30.6 33.6 35.7 30.7	39.7 37.8 35.4
	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan	4.47 5.54 4.3 10.17 1.06 3.81	3.36 3.97 3.21 6.24 0.51 3.40	2.47 3.58 3.35 4.07 0.48 1.56	3.43 2.31 1.99 4.24 0.26 0.72	24.4 31.5 29.1 27.0 29.2	24.3 30.6 31.2 26.9 29.7	30.0 30.7 24.6 28.1	26.8 31.2 28.5 29.5	Madhya Pradesh Maharashtra Orissa Punjab	5.6 6.2 4.9 7.1 2.3	3.6 5.6 5.2 4.2 0.6	4.1 5.3 4.2 4.3 0.4	5.4 4.8 3.5 5.8 0.1	32.2 29.8 34.6 29.0 33.9	32.1 33.3 34.8 31.0 28.8	30.6 33.6 35.7 30.7 28.1	39.7 37.8 35.4 40.3
	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu	4.47 5.54 4.3 10.17 1.06 3.81 7.52	3.36 3.97 3.21 6.24 0.51 3.40 4.80	2.47 3.58 3.35 4.07 0.48 1.56 2.50	3.43 2.31 1.99 4.24 0.26 0.72	24.4 31.5 29.1 27.0 29.2 34.7	24.3 30.6 31.2 26.9 29.7 31.5	30.0 30.7 24.6 28.1 26.5	26.8 31.2 28.5 29.5 25.1	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan	5.6 6.2 4.9 7.1 2.3 4.7	3.6 5.6 5.2 4.2 0.6 3.4	4.1 5.3 4.2 4.3 0.4 2.2	5.4 4.8 3.5 5.8 0.1 1.9	32.2 29.8 34.6 29.0 33.9 33.9	32.1 33.3 34.8 31.0 28.8 34.6	30.6 33.6 35.7 30.7 28.1 29.3	39.7 37.8 35.4 40.3 37.2
	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal	4.47 5.54 4.3 10.17 1.06 3.81 7.52 1.04	3.36 3.97 3.21 6.24 0.51 3.40 4.80 0.46	2.47 3.58 3.35 4.07 0.48 1.56 2.50 1.08	3.43 2.31 1.99 4.24 0.26 0.72 0.96 0.42	24.4 31.5 29.1 27.0 29.2 34.7 36.7	24.5 30.6 31.2 26.9 29.7 31.5 33.0	21.7 30.0 30.7 24.6 28.1 26.5 31.2	26.8 31.2 28.5 29.5 25.1 32.2	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu	5.6 6.2 4.9 7.1 2.3 4.7 6.3	3.6 5.6 5.2 4.2 0.6 3.4 4.6	4.1 5.3 4.2 4.3 0.4 2.2 3.9	5.4 4.8 3.5 5.8 0.1 1.9 1.6	32.2 29.8 34.6 29.0 33.9 33.9 35.1	32.1 33.3 34.8 31.0 28.8 34.6 35.8	30.6 33.6 35.7 30.7 28.1 29.3 34.8	39.7 37.8 35.4 40.3 37.2 36.1
	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal Uttar Pradesh	4.47 5.54 4.3 10.17 1.06 3.81 7.52 1.04 4.7	3.36 3.97 3.21 6.24 0.51 3.40 4.80 0.46 3.4	2.47 3.58 3.35 4.07 0.48 1.56 2.50 1.08	3.43 2.31 1.99 4.24 0.26 0.72 0.96 0.42	24.4 31.5 29.1 27.0 29.2 34.7 36.7 29.2	24.5 30.6 31.2 26.9 29.7 31.5 33.0 28.3	21.7 30.0 30.7 24.6 28.1 26.5 31.2 24.4	26.8 31.2 28.5 29.5 25.1 32.2 28.5	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal	5.6 6.2 4.9 7.1 2.3 4.7 6.3 2.0	3.6 5.6 5.2 4.2 0.6 3.4 4.6 1.2	4.1 5.3 4.2 4.3 0.4 2.2 3.9 0.9	5.4 4.8 3.5 5.8 0.1 1.9 1.6 0.7	32.2 29.8 34.6 29.0 33.9 33.9 35.1 30.5	32.1 33.3 34.8 31.0 28.8 34.6 35.8 35.1	30.6 33.6 35.7 30.7 28.1 29.3 34.8 27.5	39.7 37.8 35.4 40.3 37.2 36.1 32.9
	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal Uttar Pradesh West Benoal	4.47 5.54 4.3 10.17 1.06 3.81 7.52 1.04 4.7 9.46	3.36 3.97 3.21 6.24 0.51 3.40 4.80 0.46 3.4 3.99	2.47 3.58 3.35 4.07 0.48 1.56 2.50 1.08 3.64 2.45	3.43 2.31 1.99 4.24 0.26 0.72 0.96 0.42 1.93	24.4 31.5 29.1 27.0 29.2 34.7 36.7 29.2 28.9	24.5 30.6 31.2 26.9 29.7 31.5 33.0 28.3 28.5 25.5	21.7 30.0 30.7 24.6 28.1 26.5 31.2 24.4 28.3	26.8 31.2 28.5 29.5 25.1 32.2 28.5 29.0	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal Uttar Pradesh	5.6 6.2 4.9 7.1 2.3 4.7 6.3 2.0 5.9	3.6 5.6 5.2 4.2 0.6 3.4 4.6 1.2 4.7	4.1 5.3 4.2 4.3 0.4 2.2 3.9 0.9 3.4	5.4 4.8 3.5 5.8 0.1 1.9 1.6 0.7 2.3	32.2 29.8 34.6 29.0 33.9 33.9 35.1 30.5 31.5	32.1 33.3 34.8 31.0 28.8 34.6 35.8 35.1 33.5	30.6 33.6 35.7 30.7 28.1 29.3 34.8 27.5 32.6	39.7 37.8 35.4 40.3 37.2 36.1 32.9 36.9
	Madhya Pradesh Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal Uttar Pradesh West Bengal All India	4.47 5.54 4.3 10.17 1.06 3.81 7.52 1.04 4.7 9.46 4.87	3.36 3.97 3.21 6.24 0.51 3.40 4.80 0.46 3.4 3.99 3.23	2.47 3.58 3.35 4.07 0.48 1.56 2.50 1.08 3.64 2.45 2.84	3.43 2.31 1.99 4.24 0.26 0.72 0.96 0.42 1.93 1.42	24.4 31.5 29.1 27.0 29.2 34.7 36.7 29.2 28.9 30.0	24.5 30.6 31.2 26.9 29.7 31.5 33.0 28.3 28.5 28.5	21.7 30.0 30.7 24.6 28.1 26.5 31.2 24.4 28.3 25.4	26.8 31.2 28.5 29.5 25.1 32.2 28.5 29.0 27.4	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal Uttar Pradesh West Bengal	5.6 6.2 4.9 7.1 2.3 4.7 6.3 2.0 5.9 3.2	3.6 5.6 5.2 4.2 0.6 3.4 4.6 1.2 4.7 2.4	4.1 5.3 4.2 4.3 0.4 2.2 3.9 0.9 3.4 1.4	5.4 4.8 3.5 5.8 0.1 1.9 1.6 0.7 2.3 0.6	32.2 29.8 34.6 29.0 33.9 35.1 30.5 31.5 33.5	32.1 33.3 34.8 31.0 28.8 34.6 35.8 35.1 35.5 34.6	30.6 33.6 35.7 30.7 28.1 29.3 34.8 27.5 32.6 33.9	39.7 37.8 35.4 40.3 37.2 36.1 32.9 36.9 38.3
	Madhya Pradesh Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal Uttar Pradesh West Bengal All India	4.47 5.54 4.3 10.17 1.06 3.81 7.52 1.04 4.7 9.46 4.87	3.36 3.97 3.21 6.24 0.51 3.40 4.80 0.46 3.4 3.99 3.23	2.47 3.58 3.35 4.07 0.48 1.56 2.50 1.08 3.64 2.45 2.84	3.43 2.31 1.99 4.24 0.26 0.72 0.96 0.42 1.93 1.42 1.76	24.4 31.5 29.1 27.0 29.2 34.7 36.7 29.2 28.9 30.0 30.4	24.5 30.6 31.2 26.9 29.7 31.5 33.0 28.3 28.5 25.8 29.9	21.7 30.0 30.7 24.6 28.1 26.5 31.2 24.4 28.3 25.4 28.6	26.8 31.2 28.5 29.5 25.1 32.2 28.5 29.0 27.4 30.5	Madhya Pradesh Maharashtra Orissa Punjab Rajasthan Tamil Nadu Uttaranchal Uttar Pradesh West Bengal All India	5.6 6.2 4.9 7.1 2.3 4.7 6.3 2.0 5.9 3.2 4.4	3.6 5.6 5.2 4.2 0.6 3.4 4.6 1.2 4.7 2.4 3.8	4.1 5.3 4.2 4.3 0.4 2.2 3.9 0.9 3.4 1.4 2.9	5.4 4.8 3.5 5.8 0.1 1.9 1.6 0.7 2.3 0.6 2.0	32.2 29.8 34.6 29.0 33.9 35.1 30.5 31.5 33.5 33.9	32.1 33.3 34.8 31.0 28.8 34.6 35.8 35.1 35.5 34.6 35.0	30.6 33.6 35.7 28.1 29.3 34.8 27.5 32.6 33.9 34.4	39.7 37.8 35.4 40.3 37.2 36.1 32.9 36.9 38.3 37.6

Source: 2004-05 estimates are calculated from grouped data from NSSO Report 508. Estimates for 1983, 1987-88 and 1993-94 are calculated from the unit level data respectively.

Source: 2004-05 estimates are calculated from grouped data from NSSO Report 508. Estimates for 1983, 1987-88 and 1993-94 are calculated from the unit level data respectively.

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