

DEPARTMENT OF ECONOMICS
KURUKSHETRA UNIVERSITY KURUKSHETRA
(Only in the University Teaching Departments)
M.PHIL. ECONOMICS
Scheme of Examination w.e.f. 2016-17

Scheme of Examination for M.Phil. Economics

1. The M.Phil Economics Course has been divided into 2 Semesters spread over 1 year.
2. Every Student of M.Phil. Economics Course has to pass **12 Credits (8 Core Courses Credits + 4 Elective Course Credits)**
3. The M.Phil. Economics Course is of 20 Credits and every student has to pass 12 Credits to earn the Degree under Choice Based Credit System.
4. Every Student of M.Phil Economics has to prepare and submit a Dissertation under the Supervision of an eligible Teacher. After submission of Dissertation Every Candidate shall appear in Viva-Voce Examination on the Dissertation. Grade will be given to the candidate by the examiner.

PAPER CODE	NOMENCLATURE	EXTERNAL	INTERNAL	CREDITS		
CORE PAPERS				L	T	P
M.Phil – 101	Research Methodology in Economics	80	20	4	$\frac{1}{2}$ Hrs./G	-
M.Phil – 102	Seminars (Two)		100	-	$\frac{1}{2}$ Hrs./G	4
M.Phil - 103	Dissertation			-	$\frac{1}{2}$ Hrs./G	-
ELECTIVE PAPERS						
M.Phil – 104	Choose any one of the followings					
	Option (i)	Recent Developments in Economic Theory	80	20	4	$\frac{1}{2}$ Hrs./G -
	Option (ii)	Recent Developments in International Trade and Development Theory	80	20	4	$\frac{1}{2}$ Hrs./G -
	Option(iii)	Current Issues and Policies in Indian/Global Economy	80	20	4	$\frac{1}{2}$ Hrs./G -
Total			300		12	

Total Marks: 300

Total Credits: 12

Paper-101

Research Methodology in Economics

Total Credit: 4

Time: 3hours

Max. Marks: 100

External: 80

Internal: 20

Note: Two questions will be set from each unit. Candidates are required to attempt four questions selecting one from each unit.

Course Objective: The course introduces the nature and basic theoretical system of economics with an aim that students shall be able to extend the frontiers of knowledge, test old theories and solve basic and applied problems. This course covers the basic steps and process of conducting applied economic research. This includes the selection of topic, literature review and survey, selection of research method and approach, formulation of hypothesis, testing of hypothesis using statistical analysis, and summarizing results. The students will organize and complete the research project in stages. Course objectives include, in addition to learning well the topics of the course as stated above, applying economic theory to real world problems and concerns, learning the vast array of information available to economists over the Internet and in the library, learning where resources and data can be located, using statistical methods to analyze and evaluate the application of economic theory and reasoning, and gaining an appreciation for the value of economic reasoning and research, while also recognizing the limitations of its application. They will also learn to write an effective research paper and be able to effectively present it to your fellow students and faculty in economics.

UNIT-I

Evolution of Scientific Knowledge: Propositions, Syllogism, Hypothesis, Scientific Method; Science as a Theoretical System; Criteria for choice of a Theory; Nature of Social Sciences vis-à-vis other Sciences; Role of values in Scientific Enquiry; Deductive and Inductive Analysis, Mill's Method of Experimental Enquiry, Fallacies; Theoretical system of Economics and its Methodology. Evolution of Economics in terms of Paradigm Shift and MSRP.

UNIT II

Research Design: Nature, types and levels of Research; Research Design and Research Process; Model building: Formulation and Its Empirical Verification; Formulation of Research Proposal; Types of Sampling and Sampling Procedures; Basic Experimental Designs.

Measurement and Scaling Techniques: nominal, ordinal, interval and ratio data; Likert's scale, Semantic differential scale, Thrustone scale.

Basic Hypothesis Testing Procedure; Major Parametric and Non Parametric Tests; Factor analysis, Discriminant analysis, Cluster analysis, Conjoint Analysis,

UNIT-III

Linear Regression Model upto two explanatory variables, OLS Estimates and Their Properties. R^2 and adjusted R^2 Functional forms of Regression Models, Growth Rates, Nature, Test, Consequences and remedial steps of problem of Heteroscedasticity, Multicollinearity and Autocorrelation

UNIT- IV

Time as a variable, Dummy Variable Technique Use of dummy variables, regression with dummy dependent variables; The LPM , Logit and Probit Models. Time Series; Stationarity, Unit Roots, Co-Integration, Dicky Fuller Test, Engel Granger Test, Forecasting with ARIMA and VAR Models-Box Jenkins Methodology, Vector Auto Regression (VAR). Introduction to Panel Data Methods: Problems with panel data: Pooled OLS, Random effects and fixed effects models

Reading List

1. Cohen , M.E. and Negel, E. 'Introduction to Logic and Scientific Methods'
2. Kuhn, T.S. 'The Structure of Social Sciences'
3. Alen Ryan ' The Philosophy of Social Sciences'
4. R. Runder ' The Philosophy of Social Sciences'
5. Mishra Vikas ' The Study of Product Behaviour'
6. Goode and Hatt ' Methods of Social research'
7. Speigal, M. R. 'Theory and Prodblems of Statistics'
8. Croxton, F. E., D. Cowden and S. Kliein, Applied General Statistics'
9. Gupta S.C. and V.K. Kapoor, 'Fundamentals of Applied Statistics'
10. Gupta S. C. 'Fundamentals of statistics'
11. Gujarati, D.N. 'Basic Econometrics' (2nd Edition)
12. Intrilligator, M.D. 'Econometric Methods, Techniques and Applications'
13. Johnson J. 'Econometric Methods'
14. Kmenta J. 'Elements of Econometrics'
15. Koutsoyiannis, A. 'Theory of Econometrics'
16. Maddala G.S.(Ed) 'Econometric Methods and application'
17. Pindyck R.S. and D.L. Rubinfeld 'Econometric Models and Economic Forecasts'

Paper 104 Option (i)

Recent Developments in Economic Theory

Total Credit: 4

Time: 3hours

Max. Marks: 100

External: 80

Internal: 20

Note: Two questions will be set from each unit. Candidates are required to attempt four questions selecting one from each unit.

Course Objective: The students going through this Post PG Course are expected to understand the recent developments in micro and macro economic theory at higher abstraction level with more philosophical underpinnings so that they can be prepared to take up the economic research seriously. They will be acquainted to handle theoretical problems of the market failure, inefficiency, provision of public goods, impact of risk & uncertainty on behavior of economic agents and latest concepts of social welfare function. One unit has been devoted to macro economic developments where the selected modules will refine the thoughts in Keynesianism, monetarism and stabilization policies.

UNIT- I

Inefficiency of resource allocation in the presence of externalities; solutions; coase theorem; The problem of common property. Markets with Asymmetric information: Issues of Hidden Knowledge; Market signaling; Moral Hazard and Adverse selection in insurance and product markets; theories of efficient provision of public goods; private provision of public goods; preference revelation mechanisms; Club goods.

UNIT – II

Individual behavior towards risk, expected utility and certainty equivalence approaches, risk and risk aversion- sensitivity analysis, gambling and insurance, the economics of insurance, cost and risk, risk pooling and risk spreading, mean-variance analysis and portfolio selection, Markowitz, Sharpe, CAPM, APT; optimal consumption under uncertainty, competitive firm under

uncertainty, factor demand under price uncertainty, the efficient market hypothesis, stochastic models of inventory demand.

UNIT – III

Welfare Economics & Game Theory

Modern Welfare Economics - Social Welfare function. The theory of second best. Democracy and Welfare Economics - Representations, Negotiation, Rawls Theory of justices.

Game Theory Extensive forms and normal forms, dominant strategies and elimination of dominant strategies, Nash equilibrium, cooperative and non-cooperative games, sequential and simultaneous games, Shapely value, backward induction, sub-game perfect equilibrium, applications with oligopoly markets - Cournot, Bertrand and Stackleberg, product differentiation, cartel.

UNIT – IV

Monetarist Keynesian debate on Macro Theory and Policy. Monetarists views on Inflation and Trade Cycles. Rational Expectations and the New classical Macro Economics: Policy Ineffectiveness Time Inconsistency The Random Walk Model- Modern Approach to Consumption Real Business Cycle Theory.

New Keynesian models of macroeconomic equilibrium: (a) Real and Nominal Wage Rigidity: Menu Costs; Coordination Failures. (b) Real and Nominal Wage Rigidity: Insider Outsider Models, Efficiency Wages; Implicit Contracts.

Reading List

1. Bernstein P, Against the Gods: the Remarkable Story of Risk (Wiley; 1996)
2. Biswas T, Decision-Making under Uncertainty (Part I), (MacMillan; 1997)
3. Hillier B, The Economics of Asymmetric Information (Part II), (MacMillan; 1997)
4. Dionne and Harrington (eds.), Foundations of Insurance Economics (Kluwer; 1992)
5. Hey J and Lambert P J (eds.), Surveys in the Economics of Uncertainty, (Basil Blackwell; 1987)
6. Hey J, (1992), "Uncertainty in economics", Ch 13 in Greenaway et al (eds), Companion to Contemporary Economic Thought sections 1-2
7. Wik, Mette (1996), 'Individual Decision Making Under Risk: Deficiencies of and Alternatives to Expected Utility Theory'.
<http://www.umb.no/ios/Publikasjoner/Fulltekst/D9623.pdf>
8. Rees R (1989) "Uncertainty, Information and Insurance" in Current Issues in Microeconomics (ed. J D Hey) MacMillan; London
9. Wisniewski M, Quantitative Methods for Decision Makers (2nd edn), (Pitman; 1997); Ch 6
10. McKenna C J, The Economics of Uncertainty, (Wheatsheaf; 1986); Chs 1 and 2

11. Katz M and Rosen H, *Microeconomics* (3rd edn), (Irwin; 1998); pp 159-166
12. Hey J, *Uncertainty in Microeconomics*, (Martin Robertson; 1979); Ch 5
13. Machina M, (1987) "Choice under uncertainty: problems solved and unsolved" *Journal of Economic Perspectives*. Reprinted in Dionne and Harrington, *Foundations of Insurance Economics* (1992)
14. Shavell S (1979) "On moral hazard and insurance" *Quarterly Journal of Economics* 93, 541-562. Reprinted in Dionne and Harrington, *Foundations of Insurance Economics* (1992)
15. Laffont, Jj, *The Economics of Uncertainty and Information*, MIT Press
16. Samuelson, "Pure Theory of Public Expenditure," *Review of Economics and Statistics*, Nov 1954, 387-389
17. Samuelson, "Diagrammatic Exposition of a Theory of Expenditures," *Review of Economics and Statistics*, Nov 1955, 350-356
18. Samuelson, "Pure Theory of Public Expenditure and Taxation," *Public Economics*, Macmillian, 1969, 492-517
19. Gronberg; Liu. "The Second Best Level of a Public Good. *Journal of Public Economic Theory*. 4 (3), 2002, 431-453.
20. Deb and Razzolini, Auction-Like Mechanisms for Pricing Excludable Public Goods, *Journal of Economic Theory*, Oct. 1999, 340-368
21. Groves, T. and J. Ledyard, "Optimal Allocation of Public Goods: A Solution to the Free Rider Problem," *Econometrica*, 45, 1977, 783-810.
22. Ledyard, John O. and Thomas R. Palfrey, "The Approximation of Efficient Public Good Mechanisms by Simple Voting Schemes," *Journal of Public Economics*, Feb 2002, 153-173.
23. Andreoni, "Privately Provided Public Goods in a Larger Economy: The Limits of Altruism," *Journal of Public Economics*, 35(1), Feb 1988, 57-73.
24. Bergstrom, Blume, and Varian. "On the Private Provision of Public Goods," *Journal of Public Economics*. 29(1), February 1986, 25-49.
25. Besley and Coate, "Centralized Versus Decentralized Provision of Local Public Goods: A Political Economy Approach," *Journal of Public Economics*. 87(12), Dec 2003, 2611-2637.
26. Bewley, T., "A Critique of Tiebout's Theory of Local Public Expenditures," *Econometrica*, 49(3), May 1981, 713-740.
27. Brueckner, "A Tiebout/Tax-Competition Model," *Journal of Public Economics*. 77(2), Aug 2000, 285-306.
28. Tullock, Gordon, Arthur Seldon, and Gordon L. Brady. *Government Failure: A Primer on Public Choice*. Washington: Cato Institute, 2002.
29. Buchanan, James and Gordon Tullock. *The Collected Works of James M. Buchanan, Volume 3: The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Indianapolis: Liberty Fund Inc., 1999.
30. D. Muller, *Public Choice*, Cambridge University Press.
31. Hans van Den Doel, *democracy and welfare economics*, Cambridge University Press.
32. Per-Olov Johansson, *An Introduction to Modern Welfare Economics*, Cambridge University Press.

33. William J. Baumol, Welfare Economics and the Theory of the State, Harvard University Press, 1965 (2nd edition)
34. Edgren, John A, On the Relevance of John Rawls's Theory of Justice to Welfare Economics, Review of Social Economy, Vol. 53, No. 3, Fall 1995
35. Pindyck, R.S. Rubinfeld, D L & P.L. Mehta (2005) : Microeconomics (5th Edition), Pearson Education, Delhi
36. Dornbusch, R, S. Fischer, R. Startz (2004) : Macroeconomics, (9th Edition) Tata McGraw Hills Publishing Co. Ltd., New Delhi
37. Katz, M L and Harvey S Rosen (1999) : Microeconomics (3rd Edition) Irwin
38. Jha Raghendra (2008) : Contemporary Macroeconomic Theory and Policy, New Age International Publications.
39. Verian H. (2000) Microeconomic Analysis, W.W Norton New Yark. •
40. Stigler G. (1996) Theory of Price, 4th Edition, Prentice Hall of India, New Delhi. • Samuelson, P.A. and W.O. Nordhaus (1998), Economics, 16th Edition, Tata McGraw Hill, New Delhi

Paper – 104 Option: (II)

Recent Developments in International Trade and Development Theory

Total Credit: 4

Time: 3hours

Max. Marks: 100

External: 80

Internal: 20

Note: Two questions will be set from each unit. Candidates are required to attempt four questions selecting one from each unit.

Course Objective: A lot of new economic literature has emerged in the international trade theory according to the changed world economic order. The topics selected in this course will open new areas of research for the aspiring students. Important debates of the contemporary international economic scene related with recent theories, economic integration, WTO, trade, development & environment have been selected in this paper.

UNIT - I

Recent Developments in Trade Theory: Trade Liberalization, Lessons from trade liberalization in case of developing countries; Globalization and Institutional Economics; Global Trading System; Theory of Preferential trade Agreements.

UNIT – II

International Economic Integration: Meaning, Course and Future Prospects; Asian Economic Integration. Theories of Exchange Rate Determination.

UNIT – III

Trade and Environment; WTO and International Trade; Intellectual Property Rights; Agreement of Agriculture; Technical Barriers to Trade; And Anti-Dumping law.

UNIT – IV

The Challenge of Economic development; Development perspectives; Trade strategies for Economic development, Human Resources and Economic Development; Market Mechanism and Emerging Market Economies; Transitional Economies; Case studies of Developing economies: India, China, Australia.

Reading List

1. World bank, "Proceedings of the World Bank Annual Conference on Development Economics, 1990.
2. Sebastian Edwards, "NBER Reprint No. 1245" Structural Adjustment Policies in Highly Indebted Countries.
3. Walfer G. Bollnier, "Structural Adjustment and Policy Reform: Perspectives from International Experiences", published by Indian Council for research on International Economic Relations, 40 Lodhi Estate, New Delhi-110003.
4. Amazon.co.uk: Recent Developments in International Trade Theory, 2007.
5. Keith E. Maskus (Ed.): "The WTO, International Property Right and the knowledge Economy, EE publications 2004, 648 P.
6. Edmund Amann (Ed.), "Regulating Development", EE publication, 2006.
7. Growth & Economic Development, Essays in Honour of A. P. Thirwall, Edited by Philip Arestis.
8. Regulating Development, Evidence from Africa and Latin America, Edited by Edmund Amann, University of Manchester, UK, 2006-07.
9. Lynn K. Myteika (Ed.), "Innovation and Economic Development", United Nations University, 2006-07.
10. Giovanni Anania, Mary E. Bohman, Colin A. Carter and Alex F. McCalla (Ed.) "Agricultural Policy reform and the WTO", 2006-07.
11. Simon J. Evenett (Ed.), "The WTO and Government Procurement", University of St. Gallen, Switzerland and Bernard Hoekman, 2006-07.
12. Kym Anderson (Ed.), "The WTO's Core Rules and Disciplines", University of Adelaide, Australia, 2006-07
13. Chad P. Bown (Ed.), "The WTO, Safeguards, and Temporary Protection from Imports", Brandeis University, US, 2006
14. Keith E. Maskus (Ed.), "The WTO, Intellectual Property Rights and the Knowledge Economy", 2006-07.
15. Petros C. Mavroidis and Alan O. Sykes (Ed.) "The WTO and Technical Barriers to Trade", 2006-07
16. Spencer Henson and John S. Wilson (Ed.) "The WTO and Technical Barriers to Trade", 2006-07
17. Bernard Hoekman and Caglar Ozden (Ed.) "Trade Preferences and Differential Treatment of Developing Countries", 2006-07
18. The WTO, Economic Interdependence, and Conflict, Edited by Edward D. Mansfield and Marc L. Busch.
19. Meier, G. M. (Ed.), "Leading Issues in Economic Development" Latest Edition, Oxford University Press.
20. Todaro, M.P. & Smith, "Economic Development in Third World" Orient Langman, Latest Edition.
21. Myrdal, G. (1970), "The Challenge of World Poverty", Pantheon, New York
22. Myrdal, G. (1968), "Asian drama", Pantheon, New York.
23. Higgins, B. (1966), "Economic Development Principles, Problems and Policies" Central Book Depot, Allahabad.

24. Myint, H, "Economic Theory and the Underdeveloped Countries", Oxford University Press, New York.
25. Cypher, J.M.and Dietz. J.L. (2003)"The Process of Economic Development" Rutledge
26. Ghatak, Subrate (2003),"Introduction to Development Economies" Routledge
27. Thirwall, A.P. (2003),"The Nature of Economic Growth", Routledge.
28. Streeten, Paul (1981),"Development Perspectives" McMillan London
29. Streeten, Paul (1979),"Trade Strategies for Development" Mcmillan, London
30. Thirwall, A.P. (2003),"Growth and Development with special reference to Developing Economies" Palgrave Macmillan

Paper –104 Option (III)

Current Issues and Policies in Indian Economy

Total Credit: 4

Time: 3hours

Max. Marks: 100

External: 80

Internal: 20

Note: Two questions will be set from each unit. Candidates are required to attempt four questions selecting one from each unit.

Course Objective: The present paper targets the analysis of all Indian economic policies which is the need of the hour. The students should try to understand the policy suggested by theory according to real conditions, practiced policy, gap their of, problems in implementation and interface of the policies with other domains/disciplines. The paper provides a number of options to M.Phil students to choose future policy research area.

UNIT-I

Long term Challenges and Policy Measures in Indian economy;
Infrastructure in the Indian Economy: Rationale and Challenges;
Nature and Extent of unemployment and poverty with latest data;
Rationale and Issues for Good Governance in Indian economy;
Indian Perspectives of Sustainable Development Goals (SDGs) 2030.

UNIT-II

Latest Indian Monetary Policy of the Reserve of India (RBI);
Policy for tackling Inflation in Indian Economy;
Autonomy of RBI;
Changing patterns and developments in Banking and Financial sector reforms;
Latest trends in Indian Fiscal Policy.

UNIT-III

Latest Foreign Trade Policy of India;
External Borrowing and BOP problem in India;
International Financial Institutions (IMF, WB) and the Indian Economy;
WTO and the Indian Economy;
Impact of the global economic crisis on the Indian Economy.

UNIT-IV

Challenges in Indian Agriculture;
Issues in Food security of India;
Latest Industrial Policy;
National Manufacturing Policy;
Challenges and opportunities in Skill India, Digital India and Make in India.

Reading list

1. Kapila Uma, Indian Economy, Academic Foundation New Delhi Latest Edition.
2. Latest annual as well as other reports and surveys from Ministry of Finance, Ministry of Industry, Ministry of Agriculture, RBI, IMF, WB, UNO and WTO as per the instructions by teacher concerned
3. Latest Government of India, Economic Survey, (Annual), Ministry of Finance, New Delhi.
4. Latest Government of India, Planning Commission; Five Year Plan.
5. Mishra S.K. and Puri V.K, Indian Economy Himalya Publication House Latest Edition.
6. Garav Dutt and Ashwani Mahajan, Datt and Sundram Indian Economy, S Chand and Company Latest Edition
7. M.M.Goel: ECONOMICS OF HUMAN RESOURCE DEVELOPMENT IN INDIA (First Edition 2011, Second Edition 2012) ISBN No 978- 93-5058-014-1 published by VK Global Publications Pvt. Ltd., New Delhi,
8. M.M.Goel: Monograph: INDIAN ECONOMY Long Term Challenges & Policy Measures, published by Think-Line , Aguna Gaurav Nyas Publication, Nasik No 91 (2014)
9. M.M.Goel: INFORMAL SECTOR OF INDIAN ECONOMY: CHALLENGES AND OPPORTUNITIES, published in The Indian Economic Journal, ISSN0019-4662 Special Issue on Challenges for Transforming the Informal Sector in India, Dec.2014, pp 20 - 25.
10. M.M.Goel & Akhil Bhat: TRADE FACILITATION AGREEMENT OF WORLD TRADE ORGANIZATION –VS FOOD SECURITY IN INDIA: ISSUES AND CONCERNS published in Viewpoint, Vol.5 No 2 July-December, 2014 ISSN 2229-3925- An International Journal of Management and Technology, pp 48-52.
11. M.M.Goel & Archana Chaudhry: ANATOMY OF HUMAN RESOURCES IN RESERVE BANK OF INDIA(RBI) published in Voice of Research , volume 2, issue 1 (June, 2013) ISSN-2277-7733, pages 44-48
12. M.M. Goel & Suraj Walia: ANALYSIS OF AGRICULTURAL DEVELOPMENT IN INDIA, published jointly with Mr. Suraj Walia in The Indian Journal of Economics, vol. XXXIIC No 370 January 2013 ISSN 0019-5170, pp 405-423.
13. M.M.Goel: DEMOGRAPHIC DIVIDEND IN INDIA: OPPORTUNITIES, CHALLENGES AND POLICY MEASURES. published in The Indian Economic Journal, ISSN0019-4662 Special Issue on Human Resource Development and Employment Pattern, Dec.2012, pp 242-247.

14. M.M.Goel & Suinana: FOOD SECURITY & SUSTAINABILITY OF AGRICULTURE IN INDIA, published in Arthshodh, A bi-annual Journal, University of Rajasthan, Jaipur, ISSN 2230-7877, pp25-42.
15. M.M.Goel: BUSINESS ETHICS AND GOOD GOVERNANCE: AN ACADEMIC PERCEPTION, published in Viewpoint, vol.3 No 1 January-June, 2012 ISSN 2229-3825- An International Journal of Management and Technology, pp 1-2.
16. M.M.Goel & Archana Chaudhry: RATIONALE FOR AUTONOMY OF RESERVE BANK OF INDIA(RBI) published in Proficient – An international Journal of Management, volume iv, issue 1 (January, 2012) ISSN-0975-475X, pages 07-17.
17. EDUCATION AND SKILL DEVELOPMENT IN INDIA: A REVIEW, published in The Indian Economic Journal, ISSN0019-4662 Special Issue on Enhancing Human Resources for Inclusive Growth, Employment and Welfare, December 2011, pp 69-78.
18. M.M.Goel & Archana Chaudhry: MONETARY POLICY OF INDIA: A REVIEW, published in Varta, Vol.XXXII, Oct.2011.No.2, pages 01-11
19. M.M.Goel & Indpreet Kaur : BALANCING BETWEEN CROP DIVERSIFICATION AND FOOD SECURITY, published in Indian Journal of Industrial Economics & Development, Vo.7, issue 1, September, 2011
20. GOOD GOVERNANCE: PHILOSOPHICAL AND EMPIRICAL PERSPECTIVES, published in Administrative Change Vol. XXXVII No.2 Vol. XXXVIII NO 1 January – December 2010, cited in HR Abstracts, pp 101-109.
21. GOOD GOVERNANCE : PHILOSOPHICAL AND EMPIRICAL PERSPECTIVES published in edited book ' Ethics, Integrity And Values in Public Service' by Ramesh K Arora, 2014 New Age International Publishers, New-Delhi ISBN-978—81-224-3656-3, pp 402-409
22. M.M.Goel & Sanchita: ISSUES IN SUSTAINABLE DEVELOPMENT FOR INDIAN ECONOMY published in edited book ' Environment and Sustainable Economic Development' by Raj Kumar Sen, 2011 Deep & Deep Publications, Delhi ISBN-978—81-8450-365-4
23. UNO: Sustainable Development Goals 2030.