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P. G. SEMESTER EXAMINATION REGULATIONS

CHAPTER – I

REGULATION OF GENERAL ACADEMIC MATTERS

1.1   The Departments shall follow Semester System of teaching and Examination based on continuous evaluation internally as well as externally subject to moderation of question papers. The system of evaluations of the students shall be based on Course Credit System.

1.1.1   Academic Year
The Academic Year of the department shall ordinarily be from JUNE to MAY. It may however, be modified by the Staff Council from time to time.

1.1.2   Semester
The academic year shall have two semesters, each of which shall be of 6 months duration.

1.2   Minimum working days in a Semester
A Semester shall have a minimum of 90 working/instructional days excluding examination days/Sundays/Holidays etc. The minimum number of classes in a semester shall not fall short of the number of classes as mentioned below.
1. One Credit hour courses   = 10 classes minimum
2. Two Credit hour courses   = 20 classes minimum
3. Three Credit hour courses   = 30 classes minimum
4. Four Credit hour courses   = 40 classes minimum
5. Five Credit hour courses   = 50 classes minimum

1.3   Credit hours
One credit shall signify the quantum of teaching imparted corresponding to one hour of theory class and two hours of laboratory/project work and two hours of seminar per week during a semester in respect of a particular course. Each teaching hour of theory class will be of 60 minutes and practical classes/project work will be of 120 minutes duration and seminar will be of 120 minutes duration. For field study outside headquarters, one working day will be considered as two teaching hours. However, the field study should not exceed 30 days (including Sundays) in one semester.

The P. G. Syllabus may be so designed that the total of credit hours for all four semesters shall be 80 spread equally over all semesters as far as practicable, tutorials and proctorials shall be treated as non-credit components.

1.4   Course
A course is a Unit of instruction under any discipline carrying a specific number of credit hours describing its weightage. Those courses, which a student must take as compulsory requirement, are, called Core Courses. Those courses, which a student opts out of a list of specialized courses offered by the department, are called Elective Courses.

Choice Based Credit System (CBCS) is introduced at the P. G. Semester-I level uniformly in all the subjects to be taught in paper-103. The students of P. G. Arts stream can not opt for the CBCS course of Science stream. The details of the CBCS courses offered by different P. G. Departments are given in Annexure-II.

ANNEXURE-II
CBCS: P. G. Paper-103

Department	Name of the CBCS Course
Botany	Plant in Human Welfare
Chemistry	Polymer Science
Commerce	Fundamental of Business Organization and Entrepreneurship Development
Economics	Indian Economy
Education	Pedagogical Trends and Issue
English	Global English
Geography	Introduction to Geography
History	Tourism & Heritage Management
Mathematics	Elements of Computer Programming
Odia	"Adhunika Odia Nataka o Odia Bhashara Dhwanitatwa" (Modern Odia Drama and Odia Phonetics)
Physics	Foundation in Physics
Philosophy	Practical Ethics
Political Science	Indian Government & Politics
Psychology	Fundamentals of Psychology
Sanskrit	Ancient Indian Culture
Zoology	Animal World, Human Health & Economic Zoology

1.4.1 *Grade*

The grade awarded to a student in any particular course shall be based on his/her performance in all the tests conducted during a semester and shall be awarded at the end of the semester. The grade in each course is expressed in numerical value in 10.00 scale. The marks of a student shall be converted to10.00 scale and the points scored thereby shall be called the "Grade Point" in the course. Respective "Grade Point Average" (GPA) and "Overall Grade Point Average" (OGPA) shall be awarded at the end of each semester and all semester respectively. A 3.0 Grade Point is required for passing in individual paper and 4.0 GPA to pass any semester examination. The G. P. shall be rounded to one decimal point and GPA to two decimal points.

1.4.2 Grade Point Average (G.P.A.)

Grade Point Average (G.P.A.) of a semester shall be calculated as:

$$GPA = \frac{\text{Summation of } \{(\text{Credits in each course}) \times (\text{Grade point in that course})\}}{\text{Total No. of Credits in that Semester}}$$

Where the summation is taken over all courses in a given semester, G.P.A. shall be rounded up to 2 decimal points.

1.4.3 O.G.P.A. (Overall Grade Point Average)

It is the average of accumulated grade points of a student, worked out by dividing the cumulative total of grade points by the cumulative total of credit hours of all the courses covered and completed by a student during all the Semesters. For the first semester of the programme the GPA and OGPA shall be the same.

$$OGPA = \frac{\text{Summation of } \{(\text{Credits in each semester}) \times (\text{Total Credits in that semester})\}}{\text{Total No. of Credits in that Semester}}$$

Where the summation is taken over all semesters in a given programme. OGPA shall be rounded up to e decimal points. For merit lists, in case of equality, the OGPA shall be calculated beyond two decimal places if necessary.

1.4.4 **Conversion of grades to marks and classification of results under course credit system**

The OGPA can be converted to percentage of marks in the following manner:

Percentage of Marks = (OGPA) $\times 10$

A student after successful completion of all the semesters, Degree shall be awarded in the following manner:

O.G.P.A.	≥ 6.0	: FIRST CLASS
O.G.P.A.	$\geq 5.0 - < 6.0$	: SECOND CLASS
O.G.P.A.	$4.0 - < 5.0$	: THIRD CLASS
O.G.P.A.	< 4.0	: FAIL

1.5 *Academic Calendar*

The Examination Section and the academic section shall finalise the schedule of semester registration and other academic activities at the start of academic session. The Academic Calendar shall be prepared by the Academic Committee of the University in consultation with examination section.

The broad format for academic calendar for P. G. with regard to admission, registration and commencement of classes shall be as follows:

Admission and Registration and Commencement of Classes for 1st Semester	JULY
1st Semester Examination	DECEMBER
Commencement of Classes 2nd Semester	JANUARY-MAY
2nd Semester Examination	JUNE
Commencement of 3rd Semester Classes	JULY-NOVEMBER
3rd Semester Examination	DECEMBER
Commencement of 4th Semester Classes	JANUARY-APRIL
4th Semester Examination	APRIL & MAY
Final Results to be published in the month of	JUNE

1.5.1 *Requirement of award of degree*

The minimum credit hour requirement for the Master Degree shall be 80 (eighty) credits and the residence required for Master Degree shall be continuous four semesters from the first date of registration and the maximum time allowed to complete the Master Degree shall be 8 (eight) semesters.

1.6 *Requirement for attendance*

A candidate shall be required to attend 75% lectures, tutorials and practical classes separately during the semester (For late admitted students' attendance to be calculated from the date of admission). Condonation may be granted by the staff council only to the extent of 15% in exceptional cases. (Illness, accident, mishap in the family, deputation by University/Department). When a candidate has been deputed by the University to represent the University/state for any activity, the lectures delivered during his/her absence for the purpose shall not be counted towards the calculation of attendance provided the student submits a certificate to that effect from the appropriate authority.

1.7 *Registration in a semester*

A student has to register his/her name at the beginning of every semester in the prescribed form, for the course he/she wants to take in that semester. Examination Section (General) shall notify the registration dates and the list of registered students for the semester shall be given to the Head of the Department within two weeks of the commencement of the Semester.

CHAPTER – II
REGULATIONS ON EXAMINATION MATTERS

2.1   Mid Term Examination

In each Semester there shall be one Mid Term Assessment examination of 60 minutes duration. The Mid Term examination shall be conducted by COE like that of End Term examination.   The answer scripts shall be evaluated by the external and internal examiners and the marks along with answer scripts shall be retained in COE.

2.2   Semester Examination

After the end of each semester there shall be an examination of each theory paper of 2 hours duration and of each practical paper of 4 hours duration, which shall be called Term End / "Semester Examination". The maximum marks for each theory paper shall be 50 out of which 40 marks for term end and 10 marks for Mid Term. The maximum marks for each practical/ semester/ project/ dissertation/ review examination shall be 50 for Arts and Commerce and 100 marks for Science. The classes shall remain suspended ten days (including Sundays and holidays, if any) before the date of commencement of semester test for preparation by the students.

2.3   Results of Examinations

The results shall be declared ordinarily within four weeks of completion of the examinations. A students who seeks re-addition of his/her marks in a course shall be allowed to do so by submitting an application to Registrar along with a required fees in the fee counter of the University. All such cases/complaints if any shall be disposed of by the Examination Section in a prefixed day and necessary corrections if any shall be reflected in the mark/grade sheet. The candidates shall have to appear in all the Units of a semester examination to be eligible to be a declared 'pass' provided he/she secures minimum pass marks/grade.

2.4   Promotion to the next semester

A student shall be admitted to the next semester only when he/she appears in all the papers of the concerned semester examination. However, a student failing to appear semester examination in some or of all papers due to some reasons as mentioned in 2.5 may be admitted to the next semester. Such a student shall produce sufficient proof in favour of his/her reason for not being able to appear in some or all papers of the Semester Examination on the next academic session in the corresponding semesters.

2.5   **Absence from Examination**

If a student is unable to appear a semester examination in some or all papers the Registrar shall consider his/her case for admission into the next higher semester only the following cases:
(a)   When he/she is hospitalized.
(b)   When he/she is not be able to appear in the examination due to serious illness or death of parents, brothers, sisters, spouse or children.
(c)   When he/she met an accident of serious nature.
(d)   When the department/University or any official directive deputes him/her

2.6   **Procedure for Repeat/Improvement**

A student who wants to sit for the semester examination of first and/or second semester in the subsequent academic session (for repeat or improvement) he/she shall have to apply to the Registrar in plain paper before fifteen days of the commencement of the said examination. If allowed by the Registrar, he/she shall deposit the required fees for each paper with centre charge and produce the proof to the teacher in-charge examination with permission letter from the Registrar.
In a semester to appear improvement examination the candidates must have passed the semester examination. A candidate can appear repeat examination of papers in which he/she has failed or not appeared for reasons mentioned in 2.5.

The Master Degree student seeking to appear/improvement examination in any course(s) shall get 3 chances for 1st and 2nd semester within 8 semesters.

Candidates appearing in repeat/improvement examination shall not be considered in the merit list and it shall be reflected in the Provisional Certificate cum Mark sheet (PCM) but not in the final degree certificate.

2.7 *Award of Degree Certificate, Grade/Mark sheet*

A Degree certificate under the official seal of the university and signed by the Vice-Chancellor shall be presented at the Convocation or in absentia to each of the successful students of particular degree. The Controller of Examinations shall issue the mark/grade sheet of each semester to the candidates in the sheet of each semester to the candidates in the prescribed format by depositing the required fees for marks/Grade Sheet to be deposited in the University counter.

2.8 **Guideline for filling up of Forms for PG Classes (IMP/ Repeat)**

A student shall repeat all the theory and practical papers in which he/she failed in the semester examination within a period of eight semesters from the date of first registration. Such students shall have to apply to the Head of the Department/Registrar in plain paper during the filling up of form for the ensuing semester examination. If allowed, he/she shall deposit the fees as prescribed by the University

If a candidate secures less than 3.0 Grade point in a paper(s) and less than 4.0 Grade point average in a Semester examination he/she has to appear all the papers in that Semester.

If a candidate secures less than 3.0 Grade Point in a paper(s) and a minimum 4.0 Grade point average in a semester examination, he/she has to appear only the paper(s) in which he/she secured less than 3.0 Grade point.

A candidate is eligible to sit for improvement in a paper(s) only when he/she has passed the semester examination concerned. Further, he/she can improve in a maximum of EIGHT paper(s) in the entire course. The Master Degree students seeking to take improvement examination in any course(s) shall get chances within 8 semesters from the year of admission to the course. The candidates taking this advantage (improvement) will be examined on the basis of current syllabus and the higher marks shall be retained during computation of result.

2.9

If a candidate fails to appear in any paper of the said examination and marked ABSENT his/her results will be declared only when he/she clears that paper/those papers.

2.10 *Disciplines in the Examination*

(A)   Late Comers: A student arriving in the examination hall/room fifteen minutes after the commencement of the examination shall not be ordinarily allowed to sit for the examination. No examinee shall be allowed to go out of the examination hall within one hour of commencement of examination. The invigilators shall keep a record of temporary absence of students from the examination hall/room during the examination.

(B) Adoption of unfair means in the Examination:
Possession of unauthorized materials and using it, copying from scripts of other students or from any other source, showing his/her answer script to others during the examination, creating disturbance or acting in a manner so as to cause inconvenience to other students in the examination hall or near about shall be treated as adoption of unfair means or malpractice.

Sd/-
REGISTRAR

SEMESTER PATTERN UNDER COURSE CREDIT SYSTEM – 2016-18
DEPARTMENT OF ECONOMICS, GANGADHAR MEHER
UNIVERSITY
M. A. INCONOMICS

Course no.	Course title	Credits	Marks
FIRST SEMESTER			
ECO-101	Micro Economic Theory-I	4	50 (10+40)
ECO-102	Macro Economic Theory-I	4	50 (10+40)
ECO-103	Indian Economy (CBCS)	4	50 (10+40)
ECO-104	Quantitave Methods &Computer Application-I/ Statistical Methods & Computer Application-I	4	50 (10+40)
ECO-105	Economic Development and Planning-I	4	50 (10+40)
	Total	**20**	**250**
SECOND SEMESTER			
ECO-201	Micro Economic Theory-II	4	50 (10+40)
ECO-202	Macroeconomic Theory-II	4	50 (10+40)
ECO-203	Quantitative Methods & Computer Application-II Statistical Methods & Computer Application-II	4	50 (10+40)
ECO-204	History Of Modern Economic Analysis (Contributions Of Nobellaurettes)-	4	50 (10+40)
ECO-205	Economic Development And Planning -II	4	50 (10+40)
	Total	**20**	**250**
THIRD SEMESTER			
ECO-301	Public Economics-I	4	50 (10+40)
ECO-302	International Trade & Finance-I	4	50 (10+40)
ECO-303	Mathematical Economics-I/ Financial Institutions & Markets-I	4	50 (10+40)
ECO-304	History of Modern Economy Analysis (Contributions Of Nobel Laurettes)-II	4	50 (10+40)
ECO-305	Econometrics-I / Environmental Economics-I	4	50 (10+40)
	Total	**20**	**250**
SEMESTER-IV			
ECO-401	Public Economics-II	4	50 (10+40)
ECO-402	International Trade & Finance-II	4	50 (10+40)
ECO-403	Mathematical Economics-II / Financial Institutions & Markets-II	4	50 (10+40)
ECO-404	Econometrics-II / Environmental Economics-II	4	50 (10+40)
ECO-405	Project Work And Viva Voce	4	50 (10+40)
	Total	**20**	**250**

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SEMESTER-I

ECO-101: MICROECONOMIC THEORY-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Theories of demand- utility, indifference curve (income and substitution effects: Slutsky theorem, compensated demand curve) and their applications: Revealed Preference Theory : Revision of demand theory by Hicks: Characteristics of goods approach : consumers choice involving risk.

Unit 2: Theory of Production and Costs: Production function- short period and long period; law of variable proportions and returns to scale, Isoquants- Least Cost combination of inputs : Returns to factors ; Economies of scale ; Elasticity of substitution ; Euler's Theorem ; Traditional and modern theories of Costs Empirical evidence, Derivation of Cost functions from production functions.

Unit 3: Price and Output Determination : Perfect competition- short run and long run equilibrium of the firm and industry, price and output determination, supply curve; Monopoly- short run and long run equilibrium, price determination, welfare aspects, monopoly control and regulation ; Monopolistic competition- general and Chamberlin approaches to equilibrium, equilibrium of the firm and the group with product differentiation and selling costs, excess capacity under monopolistic and imperfect competition, criticism of monopolistic competition ; Oligopoly- Non –collusive (Cournot, Betrand, Edgeworth, Chamberlin, Kinked demand curve and Stackelberg's solution) and collusive (Cartels and mergers, Price leadership and basing point price system) models ; Price and output determination under monopsony and bilateral monopoly.

ECO-102: MACRO ECONOMIC THEORY-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: National Income and Accounts- Three and Four sector economy ; different forms of national income accounting- social accounting, input output accounting, flow of funds accounting and balance of payments accounting. Consumption function- Keynes's psychological law of consumption- implications of the law ; short run and long run consumption function, Empirical evidence on consumption function ; Income – consumption relationship- absolute income, relative income, life cycle and permanent income hypotheses.

Unit 2: Supply of Money- Financial intermediation- a mechanistic model of bank deposit determination ; A behavioural model of money supply determination, a demand determined money supply process; RBI approach to money supply ; High powered money and money multiplier ; budget deficits and money supply ; control of money supply.

Unit 3: Neo-Classical and Keynesian synthesis- Neo-classical and Keynesian views on interest; The IS-LM model ; Extension of IS-LM model with Government sector ; Relative effectiveness of monetary and fiscal policies; Extension of IS-LM models with labour market and flexible prices.

ECO-103 INDIAN ECONOMY- (CBCS)
(Based on the revised syllabus of UPSC civil services exams)
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Indian Economy- Basic features and issues relating to population growth, planning, mobilization of resources, growth, development and employment, Poverty, inequality and Inclusive growth, Sustainable development, Government Budgeting.

Unit 2: Agriculture- Major crops, cropping patterns in various parts of the country, different types of irrigation and irrigation systems, storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System - objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.
Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management, Land reforms in India.

Unit 3: Social and Economic Infrastructure: Education, Health, Housing, Energy, Ports, Roads, Airports, Railways etc.
Effects of liberalization on the economy, Changes in industrial policy and their effects on industrial growth, Indian stock market and SEBI, Issues relating to India's foreign trade, role of foreign capital, FDI, external borrowings, non-resident deposits.

ECO-104:   QUANTITATIVE METHODS & COMPUTER APPLICATION-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Mathematical methods-I : Calculus : Concepts of function, Limit, Continuity and derivative ; Rules of differentiation ; Rules of partial differentiation and interpretation of partial derivatives ; Problems of Maxima and minima in single and multivariable functions ; Concept of integration ; simple rules of integration. Application of derivatives and integration in Economics.

Unit 2: Mathematical methods-II : Matrix algebra : Determinants and their basic properties ; Solution of Simultaneous equations through Cramers rule , concept of Matrix- their types, simple operations on matrices, matrix inversion and rank of a matrix, Concept of vector- its properties ; Matrices and vectors, Concept of Quadratic forms- Eigen roots and Eigen vectors ; Difference equations & Differential equations- Solution of first order and second order difference equations. Economic applications of Difference and Differential equations.

Unit 3: Computer Application in Economics : Basic applications of Microsoft Office- Excel, MS Word and Power Point, Application in Tabulation, Frequency Distribution, Correlation & Regression Analysis.

OR

STATISTICAL METHODS & COMPUTER APPLICATION-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Statistical Method ; Types of variables, classification, tabulation and graphic presentation of data, Study of frequency of data, Measures of Central tendency, measures of dispersion, skewness, moments and kurtosis. Bi-variate distribution, simple correlation, rank correlation, Linear regression analysis, Least square method- properties of regression coefficients.

Unit 2: Elements of probability theory, total probability, compound probability and mathematical expectation. Frequency distribution- Binomial, Normal, Poisson with important properties.

Unit 3: Computer Application in Economics : Basic applications of Microsoft Office- Excel, MS Word and Power Point, Application in Tabulation, Frequency Distribution, Correlation & Regression Analysis.

ECO-105:GROWTH & DEVELOPMENT-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Economic Growth-I : Economic growth and development- factors affecting economic growth, ; capital, labour and technology ; Growth models- Harrod and Domar, instability of equilibrium ; Neo-classical growth models- Solow-Swan model, Cambridge criticism of Neo-classical analysis of growth, The Capital controversy- general ideas, Kaldor's growth model.
Economic Growth-II : Technological progress- embodied and disembodies technical progress, Hicks, Harrod, Exogenous and endogenous technical progress, Learning by doing.

Unit 2: Social and Institutional Aspects of development- Development and underdevelopment- Perpetuation of underdevelopment, Poverty- Absolute and relative, Measuring development and development gap- Per capita income, inequality of income, Human development index and other indices of development and quality of life- Food security, education, health and nutrition ; Human resource development ; Population problem and growth pattern of population- Theory of demographic transition ; Population as limits to growth and as ultimate resource- Population, poverty and environment; Economic development and institutions- markets and market failure, state and state failure, issues of good governance.

Unit 3: Theories of development- Classical theory of development, contributions of Adam Smith, Ricardo, Malthus, Karl Marx and development of capitalistic economy- theory of social change, surplus value and profit, Immutable laws of capitalistic development, crisis in capitalism- Schumpeter and capitalistic development ; Innovation- role of credit, profit and degeneration of capitalism ; Structural analysis of development. Approaches to development- Partial theories of growth and development- vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis, low income equilibrium trap ; Dualism- technical, behavioural and social ; Ranis and Fei model.

SEMESTER-II

ECO-201: MICROECONOMIC THEORY-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Alternative Theories of the Firm : Critical evaluation of marginal analysis ; Baumol's sales revenue maximization model ; Williamson's model of management discretion. Marris model of managerial enterprises ; Full cost pricing rule ; Bain's limit pricing theory and its recent developments including Sylos -Labinis model, Behavioural model of the firm ; game theoretic models.

Unit 2: Distribution- Neo-classical approach- Marginal productivity theory ; Product exhaustion theorem ; Theory of distribution in imperfect product and factor markets; determination of rent, wages, interest and profit ; macro theories of distribution- Ricradian, Marxian, kalecki and kaldor's.

Unit 3: Welfare Economics- Pigovian welfare economics ; Pareto optimal conditions,Value judgement ; Social welfare function ; Compensation principle; Inability to obtain optimum welfare- Imperfections, market failure, decreasing costs ; Theory of Second Best.
General Equilibrium - Partial and general equilibrium, Walrasian excess demand. The economics of information .

ECO-202:MACROECONOMIC THEORY-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Post-Keynesian Demand for Money- Post Keynesian approaches to demand for money- Patinkin and the ral Balance effect, Approaches of Baumol and Tobin ; Friedman and the Modern quantity theory ; Crisis in Keynesian economics and the revival of monetarism.
Macroeconomics in an open economy- Income determination in an open economy. Foreign trade multiplier, Internal and external equilibrium- Mundell-Fleming model.

Unit 2: Theory of Inflation- Keynesian and Monetarist approaches to inflation ; Structuralist theory of inflation ; Phillips curve analysis- Short run and long run Phillips curve, Samuelson and Solow- the Natural rate of unemployment hypothesis, Tobin's modified Phillip's curve ; Adaptive expectations and rational expectations, Policies to control inflation.

Unit 3: Business Cucles- Theories of Schumptere, kaldor, Samuelson and Hicks. Goodwins model ; Control of business cycles- relative efficiency of monetary and fiscal policies.
New Classical Macroeconomics- The New classical critique of microfoundations, the new classical approach, Policy implications of new classical approach- empirical evidence.

ECO-203   QUANTITATIVE METHODS & COMPUTER APPLICATION-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Meaning, assumptions and limitations of simple correlation and regression analysis ; Spearman's rank correlation coefficients and their properties; Concept of the least squares and the lines of regression ; Standard error of estimate ; partial and multiple correlation and regression; methods of estimation of non-linear equations – parabolic, exponential, geometric, modified exponential, Gompertz and Logistic relationships.

Unit 2: Various types of events- classical and empirical definitions of probability; Laws of addition and multiplication ; Conditional probability and concept of interdependence ; Bayes theorem and its implications ; Expectations, Properties of Binomial, Poisson and Normal distributions. Concept of an estimator and its sampling distribution; desirable properties of an estimator ; Formulation of statistical hypotheses- Null and alternative ; Goodness of fit; Confidence intervals and levels of significance ; Hypothesis testing based on Z, t, Chi-square

Unit 3: Basic concept of sampling- random and non-random sampling ; Simple random, stratified random and PPS sampling; Computer Applications: Use of statistical packages (S.P.S.S. & E View) in frequency distribution, correlation and regression analysis, ANOVA, Time Series Tests.

OR

STATISTICAL METHODS & COMPUTER APPLICATION-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Estimation theory, interval estimation, Tests of hypotheses, level of significance, large and small sample tests, Z-test, t-test, F-test and Ch- square test.

Unit 2: Index numbers, quantity and price index number, index number formulae, construction of index numbers, construction of cost of living index number, time reversal, factor reversal and circular test.
Time series analysis- decomposition- Fitting of secular Trend, Method of de-seasaonalisation, Measurement of cyclical fluctuation and irregular variations.

Unit 3: Basic concept of sampling- random and non-random sampling ; Simple random, stratified random and PPS sampling; Computer Applications: Use of statistical packages (S.P.S.S. & E View) in frequency distribution, correlation and regression analysis, ANOVA, Time Series Tests.

ECO-204:HISTORY OF MODERN ECONOMIC ANALYSIS
(Contribution of Nobel laureates in economics)-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Theory of value, General Equilibrium, games theory, Welfare- Samuelson, J. Hicks, K.J. Arrow, Maurice Allais, R.H. Coase, J.F. Nash.

Unit 2: Macroeconomics, Monetary Economics and Financial Economics- M. Friedman, J.Tobin, F. Modigilani, H.M. Markowitz, W.F. Sharpe, M.H. Miller, M. Scholes.

Unit 3: Economic Development and Economic Growth- S. Kuznets, T.W. Schultz, W.A. Lewis, R.M. Solow.

ECO-205 GROWTH & DEVELOPMENT-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Sectoral aspects of development- Role of agriculture in economic development; Efficiency and productivity in agriculture, New technology and sustainable agriculture ; Globalisation and agricultural growth, rationale and pattern of industrialization in developing countries ; The choice of techniques and appropriate technology and employment; Efficiency of small-scale vs. large-scale production ; terms of trade between agriculture and industry ; Infrastructure and its importance ; Labour market and their functioning indeveloping countries.

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Unit 2: Trade and economic development- International trade as engine of growth ; Static and dynamic gains from trade, Prebisch, Singer and Myrdal thesis vs. Free trade ; Export-led growth ; Dual gap analysis ; balance of payments ; tariffs and effective protection ; Post-GATT international economic order ; WTO and developing countries.

Unit 3: Macro-economic policies and Development- Role of monetary and fiscal policies in developing countries- price savings, inflation and growth- Empirical evidence; external resources- FDI, aid vs. trade, technology inflow ; MNC activity in developing countries ; Borrowings- domestic and external ; Burden of borrowing- IMF and World bank policies in developing countries.

Allocation of resources- Need for investment criteria in developing countries- present vs future, Alternative investment criteria ; Cost-benefit analysis; shadow prices, project evaluation and UNIDO guidelines.
Planning and development- Need for planning- democratic, decentralized and indicative planning, micro-planning, review of Indian plan models and planning.

SEMESTER-III

ECO-301 - PUBLIC ECONOMICS-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Introduction- Role of Govt. in organized society ; changing perspectives- government in a mixed economy, public and private sector, co-operation or competition ; Govt. as an agent for economic planning and development ; Government as a tool for operationalising the planning process ; private goods, public goods, market failure- imperfections, decreasing costs, externalities, public goods.

Unit 2: Public choice- Private and public mechanism for allocating resources, problems for allocating resources, problems of preference revelation and aggregation of preferences, Voting systems, Arrow Impossibility theorem, An economic theory of democracy, Politico-eco-bureaucracy ; rent seeking and directly unproductive profit seeking (DUP) activities.

Rationale for public policy : Allocation of resources, provision of public goods, voluntary exchange models, impossibility of decentralized provision of public goods (contributions of Samuelson and Musgrave).

Unit 3: Fiscal policy- full employment, anti-inflation, economic growth, redistribution of income and wealth, interdependence of fiscal and monetary policies, budgetary deficits and its implications, Fiscal policy for stabilization-automatic vs. discretionary stabilization ; Alternative measures of resource mobilization and their impact on growth, distribution and prices, balanced budget multiplier.

ECO-302-INTERNATIONAL TRADE & FINANCE-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Theory of International trade- Theories of absolute advantage, comparative advantage and opportunity costs, modern theory of theory of absolute cost and comparative cost- Heckscher-Ohlin theory of trade. Kravis and Linder theory of trade.

Unit 2: Measurement and gains from trade - Measurement of gains from trade and their distribution ; concepts of terms of trade, their uses and limitations ; Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries ; Trade as an engine of economic growth.

Unit 3: Theory of interventions and Welfare implications- Empirical evidence and policy issues ; Theory of Interventions (Tariffs, Quotas and non-tariff barriers); Economic effects of tariffs and quotas on National income, output, employment, terms of trade, income distribution. The political economy of non-tariff barriers and their implications ; nominal, effective and optimum rates of tariffs- their measurement, impact and welfare implications.

ECO-303- MATHEMATICAL ECONOMICS-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Theory of Consumer Behaviour- Cardinal and ordinal utility maximization ; Slutsky equation, compensated demand functions, income, substitution and price effects ; Concept of elasticities- generalizations to n variable case; separate and additive utility functions; homogeneous and homothetic utility functions ; constant elasticity of substitution (CES) and transcendental logarithmic utility functions ; duality theorem ; consumers surplus ; Theory of revealed preference and index numbers; Linear expenditure systems.

Unit 2: Theory of production- Production function- homogeneous and non-homogeneous, Properties of production function ; CES, VEX and trans-log production function. Simple derivation of short run and long run cost functions ; Modern approach to theory of costs ; Cost function, constrained optimization of a producer ; Generalisation to n variable case ; Input demand functions ; Adding up theorem, Technical progress through production function.

Unit 3: Price determination in various markets- price determination in perfect competition, monopoly, monopolistic competition, duopoly, oligopoly, and monopsony; Pricing of factors of production ; Bilateral monopoly.
Market equilibrium- Marshallian and walrasian equilibrium conditions ; lagged market equilibrium ; Multi-market equilibrium- fgeneral equilibrium, systems of Walras and Debreau ; Conditions of stability for equilibrium.

OR

FINANCIAL INSTITUTIONS AND MARKETS-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: The Role of Financial Markets in the Economy: Nature of Financial System and Functions of Financial System in Economic Development, Flow of Funds in the Financial Markets, Money and Finance :Financial Intermediation and Financial Intermediaries, The Structure of the Indian Financial System , Indicators of Financial Development, Equilibrium in Financial Markets: Competition, Concentration and Efficiency, Financial Soundness Indicators.

Unit 2: Risk and Financial Assets: Types of Risks and Return (ex post and ex ante),Risk and Return of a Portfolio, Theories of Asset Pricing: Portfolio Theory , Capital Asset Pricing Model, The Arbitrage Pricing Theory, The Efficiency Market Hypothesis.

Unit 3: Financial markets: money markets-functions and features, Instruments of money market (call money, commercial paper ,CDs, TBs, Repos and Reverse Repos, CBLOs, Mutual Funds) and their implications, Factors Influencing Money Markets in India, Capital and Equity markets: Features and Functions, Debt and Equity as sources of Finance, Pricing of Debt Market Instruments, Structure of Capital Market (Primary market structure and Secondary market structure), Indices of Share Prices (SENSEX,NIFTY , Dow Jones, NASDAQ, Nikkei), Derivatives Markets-Basic concepts, functions and Types of Derivatives (Forward, Futures, Options, Swaps), Derivative pricing Models-Binomial Option Pricing Model, The Black Scholes Formula, History of Derivatives in India.

ECO-304: HISTORY OF MODERN ECONOMIC ANALYSIS
(Contribution of Nobel laureates in Economics)-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Input-Output analysis, Programming, Social accounts, Economic and social systems- W.W. Leontief, L. Kantorovich, C.T. Koopmans, R.Stone, F. Hayek, G. Myrdal.

Unit 2: International trade and Capital movement- J.E. Keade, B.Ohlin, R.A. Mundell

Unit 3: Quantitative Economic History- D.C. North, R.W. Fogel. Others- H.A. Simon, G.J. Stigler, J.M. Buchanan, G.S. backer, R.J. Lucas, W.J. Vickery, J. Mirrlees, A.K. Sen

ECO-305   ECONOMTERICS-I
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Basic economterics- Nature, meaning and scope of econometrics: Simple and general linear regression model- Assumptions, Estimation (through OLS approach) and properties of estimators, Gauss Markov theorem ; Concepts and derivation of R^2 and Adjusted R^2 ; Concept of analysis of variance approach and its application in regression analysis ; Generalised Least Squares (GLS), Estimation of non-linear equations- parabolic, exponential, geometric, hyperbolic, modified exponential, Gompertz and logistic functions.

Unit 2: Problems of regression analysis – Nature, test, consequences and remedial steps of problems of heteroscedasticity; Multicollinearity and autocorrelation; Problems of specification error, Errors of measurement (Errors in variables)

Unit 3: Regressions with Qualitative Independent variables- Dummy variable technique- Testing structural stability of regression models comparing to regressions, interaction effects, seasonal analysis, piece-wise linear regression, use of dummy variables, regression with dummy dependent variables ; The LPM, Logit, Probit models- Applications, estimation under Linear restrictions (Restricted Least Squares).

OR
ENVIRONMENTAL ECONOMICS-I

Unit 1: Fundamentals : Environmental Economics, Basic theory of environmental economics, environmental quality as a public good, natural resources, economic, renewable and non-renewable resources, conservation of natural resources.

Cost-benefit analysis and the valuation of environmental resources, cost- benefit analysis and their institutional and non-institutional assumptions, environmental costs of economic goods, limits of growth, environmental issues in developing countries.

Unit 2: Market failure, the theory of externalities and Coase theorem and related theories. The nature of market failure and problems of externalities associated with environmental problems. Coase theorem and its implications in environmental regulations, property rights and its distribution, functioning of market as an allocation mechanism for rights and property rights.

Unit 3: Theories of Optimal use of exhaustible and renewable resources ; Environmental and development trade off and the concept of sustainable development ; Integrated environmental and economic accounting and the measurement of environmentally corrected GDP ; Macroeconomic policies and environment.

SEMESTER-IV

ECO-401: PUBLIC ECONOMICS-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Public expenditure- Wagner's law of increasing state activities ; Wiseman-Peacock hypothesis ; Pure theory of public expenditure ; Structure and growth of public expenditure ; Criteria of public investment ; Social cost- benefit analysis- Project evaluation, Estimation of costs, discount rate ; Reforms in expenditure budgeting : Programme budgeting and zero base budgeting.

Taxation- Theory of incidence ; Alternative concepts of incidence- Allocative and equity aspects of individual taxes ; benefit and ability to pay approaches ; Theory of optimal taxation ; Excess burden of taxes ; Tradeoff between equity and efficiency; Theory of measurement of dead weight losses ; The problem of double taxation.

Unit 2: Public debt- Classical view of public debt ; Compensatory aspect of debt policy ; Burden of public debt ; Sources of public debt; Debt through created money ; Public borrowings and price level ; Crowding out of private investment and activity ; Principles of debt management and repayment.

Fiscal federalism- Principles of multi-unit finance ; Fiscal federalism in India ; Vertical and horizontal imbalances ; Assignment of function and sources of revenue ; Constitutional provisions ; Finance commission and Planning commission ; Devolution of resources and grants ; Theory of grants ; Resource transfer from union to states- Criteria for transfer of resources ; Centre- state financial relations in India ; Problems state's resources and indebtedness ; Transfer of resources from Union and States to local bodies.

Unit 3: Indian Public Finances- Indian tax system ; Revenues of the Union, States and local bodies ; Major taxes in India, base of taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, reforms in direct and indirect taxes, taxes on services ; Non-tax revenue of centre, States and local bodies ; Analysis of central and state government budgets ; Lack of flexibility in central and state budgets, shrinking size of development finance through budgets ; Trends in public expenditure and public debt ; Fiscal crisis and fiscal sector reforms in India ; Reports of Finance commissions in India.

ECO-402-INTERNATIONAL TRADE & FINANCE-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Balance of payments : Meaning and components of balance of payments ; Equilibrium and dis-equilibrium in the balance of payments ; The process of adjustment under systems of gold standard, fixed exchange rates and flexible exchange rates ; Expenditure-reducing and expenditure switching policies and direct controls of adjustment ; policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regimes ; A critical review of the monetary approach to the theory of balance of payments adjustment ; Foreign trade multiplier with and without foreign repercussions and determination of national income and output ; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developing countries.

Unit 2: The theory of regional blocs- Forms of economic cooperation ; Reforms for the emergence of trading blocks at the global level ; Static and dynamic effects of a customs union and free trade areas; Multilateralism and WTO ; Rise and fall of Gold standard and Bretton-woods system; Need, adequacy and determinants of international reserves ; Conditionality clause of IMF ; Reform of the international Monetary system, India and developing countries ; International trade and Financial nstitutions –Functions of GATT/WTO (TRIPS and TRIMS). UNCTAD, IMF, World bank and Asian Development bank- their achievements and failures ; WTO and World Bank from the point of view of India.

Unit 3: Trade policies in India- Trade problems and trade policies in India during the last five decade ; Recent changes in the direction and composition of trade and their implications ; rationale and impact of trade reforms since 1991 on balance of payments, employment and growth ; Problems of India's international debt ; Working and regulations of MNC in India ; Instruments of export promotion and recent import and export policies and agenda for future.

ECO-403 -MATHEMATICAL ECONOMICS-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Determination of income and fluctuations in income- Classical and Keynes macro system ; Static and dynamic multiplier. Determinants of investment, accelerator, Trade cycle model of development of Samuelson and Hicks.

Unit 2: growth models- Harrod problem ; Neoclassical model of growth ; Solow and Meade growth models with technical progress ; Optimal growth ; and golden rule of accumulation.

Unit 3: Game theory- Liner programming and Input-Output analysis : Concept of game- Two person zero-sum game, Payoff matrix, pure and mixed strategies. Maximin and Minmax solutions ; Saddle point solution ; Non- constant sum game ; Prisoners dilemma ; Linear programming- Primal and dual problem ; Simplex method ; transport and storage problems and other applications of linear programming in economics ; Input-output analysis- Open and closed systems ; Hawkins-Simon conditions ; Leontief's dynamic system ; Testing consistency of planning models.

OR
FINANCIAL INSTITUTIONS AND MARKETS-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Financial institutions- Commercial Banking: Principles of Banking, Functions of Commercial Banks ,Credit Creations, Consequences of Recent Developments in India's

Commercial Banking, Investment   Banking-Capital Acquisition, IPOs, Central Banking- Structure and Functions of the RBI   ,Credit Control Techniques, NBFIs.

Unit 2: Money and the Economy: Demand for Money-different versions, The Money Supply Processes, Money Multiplier, Money Market Equilibrium, Fisher's   Hypothesis   with Applications, Interest Rate Risk: Market Risk, Risk measurement Models-Duration Measures, Re-pricing and Maturity Models, Value at Risk.

Unit 3: International Financial Markets-Balance of Payments: Meaning, Methods of Adjustment, Foreign Exchange Markets, Fixed vs Floating, Spot vs Forward, Arbitrage, The Bretton Woods Institutions-IMF, WB, WTO : Functions Achievements and Failures, Rationale in the Era of Globalisation and Suggestions, Working of International Development Association (IDA) and International Finance Corporation (IFC)

ECO-404: ECONOMETRICS-II
Full Mark 50 (10 Mid Term + 40 End Term)

Unit 1: Simultaneous Equation models- Introduction and examples; The simultaneous equation bias and inconsistency of OLS estimators ; The identification problem ; Rules of identification- order and rank conditions ; methods of estimating simultaneous equation system ; Recursive methods and OLS ; Indirect least squares (ILS), 2SLS, 3SLS and ML methods- Applications.

Unit 2: Time series Analysis- Deterministic time series models and stochastic time series model, forecasting techniques, Forecasting with a single equation   regression   model, forecasting with ARIMA modeling; Box-Jenkins methodology; Multivariate analysis- principal component analysis (PCA) & Discriminant Analysis.

Unit 3: Dynamic econometric model- Autoregressive and distributed lag models- Koyck model, partial adjustment model, adaptive expectations ; Instrumental variables ; Almon approach to distributed lag models,   Compound   Geometric Lag model.

OR
ENVIRONMENTAL ECONOMICS-II

Unit 1: The tragedy of the commons and resource management regimes- resource management in the context of different ownership structure. Rules of access to resource and their use, management of private and state owned environmental resources.

Unit 2: Environmental problem, land use pattern, forest and environmental quality, urbanization and its impact on environment, population and environmental quality; Trade and environment in WTO regime.

Unit 3: India's environmental policy on these issues- Environmental regulations   inIndia, Peoples participation in the management of common and forest lands ; The institutions of Joint Forest management and the joint protected area management ; Social forestry- rationale and benefits, Global environmental   problem.

ECO-405   PROJECT AND VIVA
M.A (ECONOMICS)

Books and references :
MICRO ECONOMIC THEORY:
1. Kreps, David M. (1990) A Course in Microeconomic Theory, Princeton University Press, Princeton.
2. Koutsoyiannis, A (1979), Modern Micro Economics, Mac Millan Press, London
3. Layard, P.R.G. and A.W. Walters (1978), Mircoeconomic Theory, Mc Graw Hill, New York.
4. Varian, H (2000) Microeconomic Analysis, W.W. Norton, New York.
5. Baumol, W.J. (1982) Economic theory and Operation analysis, Prentice Hall of India, New Delhi.
6. Gree, H.A.G (1971) Consumer Theory, Penguin, Harmondsworth.
7. Hirshleifer J. and A. Glazer, (1997) Price Theory and Applications, Prentice Hall of India, New Delhi.
8. Da Costa, G.C (1980) Production, Prices and Distribution, Tata Mc Graw Hill, New Delhi.
9. Archibald, G.C. (Ed.) Theory of the Firm, Penguin, Harmondsworth.

MACRO ECONOMIC THEORY
1. Ackley, G (1978) Macroeconomic : Theory and Policy, Macmillan, New York.
2. Branson W.A (1989) Macroeconomic Theory and Policy, Harper and Row, New York.
3. Dornbusch, R and F. Stanley (1997), Macroeconomics, Mc Graw Hill, Inc. New York.
4. Hall, R.E and J.B Taylor (1986), Macroeconomics, W.W. Norton, New York.
5. Jha, R. (1991) Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd. New Delhi.
6. Romer, D.L. (1996), Advanced Macroeconomics, Mc Graw Hill Company Ltd. New York.
7. Shapiro E. (1996) Macroeconomic Analysis, Galgotia Publications, New Delhi.
8. Edey, M and A.t. Peacock (1967) National Income and Social Accounts, Hutchinson University Library, London.
9. Ruggles R and N. Ruggles, (1956) National Income Accounts and Income Analysis, Mc Graw Hill, New York.
10. Gordon R and S.G. harris, (1998) Macroeconomics, Addison Wesley.

QUANTITATIVE METHODS & COMPUTER APPLICATION/ STATISTICAL METHODS & COMPUTER APPLCATION

1. Chiang A.C (1986) Fundamental methods of Mathematical Economics, Mc Graw Hill, New York.
2. Allen, R.G.D (1974) Mathematical Analysis for Economists, Macmillan Press and ELBS London.
3. Yamane, Taro (1975) Mathematics for Economists, Prentice Hall of India, New Delhi.
4. Handry A.T (1999) Operations Research, Prentice Hall of India, New Delhi
5. Baumol, W.J (1984) Economic Theory and Operational Analysis, Englewood Cliffs, New Jersey.
6. Monga, G.S (1972) Mathematics and Statistics for Economists, Vikas Publishing House, New Delhi.

INDIAN ECONOMY (CBCS)

1. Ahluwalia I.J. and I.M.D Littles (Eds.) (1999) India's Economic Reforms and Development , Oxford University Press, New Delhi
2. Bardhan, P.K. (1999) The Political Economy of Development in Inda, Oxford University Press, New Delhi.
3. Bawa R.S and P.S. Raikhy (Ed.) (1997) Structural Changes in Indian Economy, Guru Nanak Dev University Press, Amritsar.
4. Chakravarty, S. (1987) Development Planning: The Indian Experience, Oxford University Press, New Delhi.
5. Dantwala, M.L. (1996) Dilemmas of Growth : The Indian Experinece, Sage Publications, New Delhi.
6. Jalan, A.K. (1986) Economic Planning in Inda, Ashish Publishing House, New Delhi
7. Jalan, B. (1992) India's Economic Policy- Preparing for the Twenty First Century, Viking New Delhi.
8. Sen R.K. and B. Chatterjee (2001) Indian Economy : Agenda for 21st Century, Deep and Deep Publications, New Delhi.
9. Byres T.J. (Ed.) (1997) The State, Development Planning and Liberalization in India, Oxford University Press, New delhi.
10. Dhameeja, N. and K.S. sastry (1998) Privatisation: Theory and Practice, A.H. Wheeler, New Delhi
11. Dubey M. (1996) An Unequal Treaty- World Trading Order After GATT, New Age International Ltd. New Delhi.
12. Gupta, S.P (1998) Post-Reform India: Emerging trends, Allied Publishers, New Delhi.
13. Srinivasan, T.N. (Ed) (2000) Eight Lectures on India's Economic Reforms, Oxford University Press, Oxford.

GROWTH AND DEVELOPMENT

1. Ghatak, S (1986) An Introduction to development Economics, Allen and Unwin, London
2. Higgins,B. (1959) Economic Development, WW Norton, New York.
3. Hogendorn, J. (1996) Economic Development, Addison, Wesley, New
4. Kahkonon, S and M.Olson (2000) A new Institutional Approach to Economic Development, Vistaar.
5. Chenery H and T.N. Srinivasan (Eds) (1989) Handbook of Development Economics, Vols. 1&2, Elsevier, Amsterdem.
6. Todaro, M.P (1996) Economic Development, Longman, London
7. Thirlwal, A.P (1999) Growth and Development, Macmillan, UK.
8. Hayami, Y. (1997) Development Economics, Oxford University Press, New York
9. Sen, A.K. (Ed) (1990) Growth Economics, Penguin, Harmondsworth

PUBLIC ECONOMICS

1. Atkinson, A.B. and J.E. Siglitz (1980) Lectures on Public Economics, Tata McGraw Hill, New York
2. Auerbach, A.J. and M. Feldstern (Eds) (1985) Handbook of Public Economics, Vol.I, North Holland, Amsterdam.
3. Jha, R (1998) Modern Public Economics, Routledge, London
4. Musgrave, R.A. (1959) The Theory of Public Finance, McGraw Hill, Kogakhusa, Tokyo
5. Shoup, C.S (1970) Public Finance, Aldine, Chicago

6. Peacock . A and G.K. shaw (1976) The Economic Theory of Fiscal Policy, George Allen and Unwin, London.
7. American Economic Association (1955) Readings in Fiscal Policy, George Allen and Unwin, London.

INTERNATIONAL TRADE & FINANCE
1. Carbough, R.J. (1999) International Economics, International Thomson Publishing, New York.
2. Chacoliades, M. (1990) International Trade : Theory and Policy, Mc Graw Hill, Kogakusha, Japan
3. Dana, M.S (2000), International Economics: Study Guide and WorkBook, Routledge Publishers, London
4. Dunn, R.M and J.H. Mutti, (2000), International Economics, Routledge, London.
5. Kindleberger, C.P. (1973) International Economics, R.D. Irwin, Homewood.
6. Salvatore, D (1997) International Economics, Prentice hall, Upper Saddle River, N.J. New York.
7. Soderstein, Bo. (1991) International Economics, The Macmillan Press, London.

FINANCIAL INSTITUTUIONS & MARKETS
1. Edminister, R.O (1986) Financial Institutions, markets and Management, Mc Graw Hill, New York.
2. Goldsmith, R.W. (1969), Financial Structure and Development, Yale, London.
3. Hanson, J.A., and S. kathuria (Eds) (1999) India- A Fiancial Sector for the Twenty-first Century, Oxford University Press, new Delhi.
4. Robonson, R.I and D. Wrightman (1981), Financial Markets, Mc Graw Hill, London.
5. Smith, P.F. (1978) Money and Financial Intermediation : The Theory and Structure of Financial System, Prentice Hall, Englewood-Cliffs, New Jersey.
6. L. M. Bhole- Financial Institutions and Markets,Tata Mcgraw Hill,New Delhi
7. Robert A.Jarrow- Finance Theory,Prentice-Hall
8. G.J Alexander and W.F Sharpe- Fundamentals of Investment,Prentice-Hall
9. M.Y Khan-Indian financial system,Tata Mcgraw hill
10. Bharati Pathak-Indian financial System,Pearson
11. John Hull- Options,Futures and other Derivatives, Prentice Hall of india.
12. E.F Fama- Foundations of Finance,Basic Books,New York
13. Prasanna Chandra- Fundamentals of Financial Management,Tata Mcgraw Hill.

HISTORY OF MODERN ECONOMIC ANALYSIS (Contribution of Nobel laureates in Economics)
1. Lendbeck, A. (Ed.) (1992) Economic Sciences : Nobel Lectures, World Scientific
2. Weintraiub, S. (Ed.) (1970) Modern Economic thought, University of Pensylvania
3. North D.C. (1990) Institutions, Institutional Change and Economic Performances, MIT Press, Cambridge, Mass.
4. Meade, J.E (1971 and 1978) Principles of Political Economy, Vols. I to IV, Duckworth, London
5. Stone, R. (1984), The Accounts of Society: Nobel Lecture
6. Miller, M.H (1998), Leverage : Nobel Lecture
7. Markowitz, H.M (1990) Foundations of Portfolio Theory, Nobel Lecture
8. Allais, M (1978) Contributions to economic Science

MATHEMATICAL ECONOMICS

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