

LESSON PLAN (DEPARTMENT OF ECONOMICS)

PAPER-WISE OBJECTIVES

Semester I

Introductory Microeconomics (CC I)

- Introductory microeconomics helps understand how individuals make decisions regarding consumption, production, and allocation of resources.
- The study enables students to understand consumer preferences, utility maximization, and the behavior of firms in different market structures.
- It provides a foundational understanding of basic economic principles such as supply and demand, opportunity cost, marginal analysis, and elasticity.

Mathematical Methods for Economics I (CC II)

- Mathematical economics equips students with mathematical techniques and methods that can be applied to analyze economic problems.
- Mathematical economics enables economists to develop quantitative models that can be used to make predictions about economic outcomes.

Semester II

Introductory Macroeconomics (CC III)

Introductory macroeconomics enables students to analyze the overall performance of an economy, including its output levels, price stability, and employment rates.

Mathematical Methods for Economics II (CC IV)

- In this paper, students learn difference equations, differential equations, optimization theory, and linear and non-linear programming. These tools allow students to model complex economic problems and derive optimal solutions.
- Studying mathematical economics enables students to develop quantitative skills, and a deeper understanding of economic theory.

Semester III

Intermediate Microeconomics I (CC V)

- Studying intermediate microeconomics helps students understand the conditions for market equilibrium and efficiency in various market structures, such as perfect competition.
- Intermediate microeconomics deals with a more comprehensive understanding and it explores topics such as consumer behavior, and production theory in greater detail.

Intermediate Microeconomics I (CC VI)

- It introduces students to various macroeconomic theories and schools of thought, such as classical economics, Keynesian economics, and monetarism.
- Advanced macroeconomics aims to provide a deeper understanding of macroeconomic theory on money demand, money supply, and government budgetary operations.

Statistics for Economics (CC VII)

- Students will understand how to summarize and describe data using statistical measures such as mean, median, mode, variance, and standard deviation.
- Gain an understanding of probability theory, including concepts such as random variables and their probability distributions, random variables.
- They will acquire knowledge of various statistical methods and techniques used for data analysis, including parametric and non-parametric tests that are useful for statistical estimation.

Data Analysis [SEC A(1)]

- Data analysis aims to understand the underlying patterns, trends, and relationships within the data. This involves exploring the data to gain insights into the phenomena being studied.
- Data analysis helps in visualizations and conveys complex information clearly and understandably.
- Students will learn how to analyze data using statistical techniques and qualitative analysis methods.

Semester IV

Intermediate Microeconomics II (CC VIII)

- Studying intermediate microeconomics II aims to deepen students' understanding of topics, such as imperfect market structure including monopoly, monopolistic competition, and oligopoly.
- Studying the paper helps students to understand topics related to general equilibrium, efficiencies, and welfare.

Intermediate Macroeconomics II (CC IX)

- The paper provides a detailed analysis of New Keynesian models, the Real business cycle models, its causes, characteristics,
- Students study various theories of consumption, including Keynesian theories, life cycle theory, permanent income hypothesis, relative income hypothesis, and inter-temporal theory of consumption.
- The paper also covers the topics related to the theory of growth which are useful for the students in understanding the overall performance of the economy.

Introductory Econometrics (CC X)

- In introductory econometrics, students learn how to specify regression models, estimate model parameters, and interpret regression results.
- The issues such as multicollinearity, heteroscedasticity, and autocorrelation that may arise in regression analysis are also taught in this paper which helps them to deal with the real-life data.

Research Methodology [SECB(1)]

- Students will learn how to design research studies. They can select research questions, formulate hypotheses, and choose the most suitable research design.
- They will learn how to conduct a literature review, identify gaps in the literature, and develop research questions or hypotheses.

Semester V

International Economics (CC XI)

- Students learn about the patterns, determinants, and consequences of international trade in goods and services. This includes studying theories of comparative advantage, gains from trade, trade barriers, trade agreements, and trade policy instruments.
- Students learn about the determinants of exchange rate movements and the implications of exchange rate regimes.
- International economics aims to provide students with a broad understanding of the trading patterns of the economies in a globalized world.

Indian Economy (CC XII)

- Studying the Indian economy students learn about the process of economic development, growth, and structural transformation in the economy.
- Students study the issues of income inequality, poverty, and social disparities in the Indian economy.
- Students learn about India's economic reforms and liberalization measures initiated in the 1990s and their impact on economic growth, investment, trade, and poverty reduction.

Applied Econometrics [DSE A(1).1]

- studying applied econometrics aims to equip students with the knowledge, skills, and analytical tools needed to analyze economic data, and conduct empirical research.
- Applied econometrics helps students develop a deeper understanding of economic data, such as time series data, cross-sectional data, and panel data.

Economic History of India (1857-1947) [DSE A(1).2]

- Studying the Economic History of India is important for gaining a comprehensive understanding of the country's economic development.
- Studying economic history helps in identifying the key factors that have influenced economic change in India. This includes understanding the impact of colonialism, trade patterns, and changes in infrastructures.

- Students study the colonial period and historical processes of economic development and growth in India.
- They study how factors such as trade, investment, infrastructures, and government policies during the British regime have contributed to economic advancement and prosperity over time.

Financial Economics [DSE B(1)]

- Studying finance, students will acquire skills in investment analysis and portfolio management.
- They will learn how to apply financial models and theories to make informed investment decisions

Semester VI

Public Economics (CC XIII)

- Students learn about the nature of public goods, properties, and differences between public goods and private goods.
- In Public finance students learn about government expenditure in the forms of taxation, the principle of taxation, and the nature of government spending.

Development Economics (CC XIV)

- Development economics aims to understand the processes that lead to sustained economic growth in developing countries.
- studying development economics provides insights into the complex processes of economic development and equips students with the knowledge needed to formulate strategies for promoting prosperity, reducing poverty, and achieving sustainable development.

Money and Financial Markets [DSE A(2).1]

- In this paper, students will gain a comprehensive understanding of core financial concepts such as risk and return, diversification, leverage, and financial market problems.
- They will learn about the structure and functioning of financial markets including stock markets, bond markets, money markets, banks,
- Studying this paper will help them understand the principles of international finance, including foreign exchange markets, exchange rate determination, international capital flows, and global financial crisis.

Environmental Economics [DSE B(2).1]

- Studying environmental economics is essential for addressing environmental challenges, and promoting sustainable development.
- Environmental economics contributes to the study of environmental justice by examining how environmental benefits and costs are distributed among different individuals.

Issues in Development Economics [DSE B(2).2]

- Studying issues in development economics is essential for understanding the complexities of economic development, identifying effective policy interventions, and promoting inclusive and sustainable development outcomes in developing countries.
- Studying development economics, students will understand the role of economic institutions, including government policies, legal frameworks, and social norms, in shaping development outcomes.

CCF-2022

Semester I

Microeconomics (CC I) Major

- It provides the knowledge of basic economic principles, including supply and demand, consumer behavior, production, and cost.
- Studying microeconomics provides a fundamental understanding of how individuals and businesses make decisions.

Introductory Statistics and Economic Applications I(SEC I)

- Basic statistics teaches techniques for summarizing and describing data, including measures of central tendency (mean, median, mode), dispersion (range, variance, standard deviation), and graphical representation (histograms, box plots, scatter plots).
- It introduces fundamental concepts of inferential statistics, such as hypothesis testing, confidence intervals, and regression analysis.

Microeconomics (CC I) Minor

- It helps students to become knowledgeable by understanding economic issues facing their communities and countries,

- It enables them to participate in discussions on economics and decision-making processes effectively.

Elementary Economics (IDC I)

- Studying the paper provides a general understanding of economic decisions made by individuals and firms.
- By studying this paper students will understand how economic decisions shape economic outcomes.

Lesson Plan – Prof. Sumana Dutta

CBCS

Semester	Paper	Unit	Sub-Topics	No. of Lectures	Outcomes	Class Exercises
I	CCI Introductory Microeconomics	Unit 1 Exploring the subject matter of Economics	*Scope and Method of Economics: Wants, Scarcity, Competing Ends and Choice - Defining Economics. * Thinking like an economist: Basic Economics Questions, Microeconomics and Macroeconomics, Normative Economics and Positive Economics.	2	Students will be able to understand the basic concepts like scarcity, opportunity cost, production, consumption etc.	Short questions on basic concepts are given.
			*Principles of Microeconomics – Principles of individual decision making and principles of economic interactions.	3	Once the students understand the concept of comparative advantage they are able to analyse that countries with lower opportunity cost with respect to a particular commodity will specialise in production of that commodity.	
			*Introduce trade off, opportunity cost, efficiency, marginal changes and cost-benefit, trade, market economy, property rights, market failure, externality and market power.	3	Students able to examine the role of prices as signal of scarcity, demand and opportunity cost in market economies.	

			<p>* Interdependence and the Gains from Trade- production possibilities frontier and increasing costs.</p> <p>* Absolute and comparative advantage, comparative advantage and gains from trade.</p> <p>* The Evolution of Market Economies, Price System and the Invisible Hand. The Decision-takers - households, firms and central authorities</p> <p>* The Concepts of Markets- individual market, separation of individual markets, interlinking of individual markets. Difference among markets- competitiveness, goods and factor markets, free and controlled markets.</p> <p>*Market and non-market sectors, public and private sectors, economies- free market, command and mixed.</p>	<p>3</p> <p>4</p> <p>4</p> <p>4</p> <p>2</p>	<p>Students able to examine the conceptual foundations of utility theory including concepts like indifference curve, consumers' equilibrium, income and price consumption curve and so on.</p>	<p>Exercises based on drawing some basic curves are given.</p>
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		Unit 6 Utilitarian Approach	<p>* Different goods: Public goods, Private goods, Common resources and Natural Monopolies</p> <p>* The History of Utility Theory – From Cardinal to Ordinal Approach.</p> <p>* Utility in Cardinal Approach- Utility and choice, Total Utility and Marginal Utility, Utility and choice-maximization, marginal utility, theory of demand.</p> <p>* Ordinal utility: Assumptions on preference ordering, indifference curve, marginal rate of substitution and convexity of IC, budget constraint.</p> <p>*consumers' equilibrium - interior and corner, Derivation of Demand Curves from ICs, composite good convention.</p>	<p>1</p> <p>2</p> <p>3</p> <p>2</p>		<p>Numerical exercises were given to find out Total utility and marginal utility. The use of basic calculus to derive slope and curvature is shown. (A class test of one hour duration will be conducted after</p>
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			<p>*Application: Cash subsidy versus subsidy in kind .Price consumption curve, Income consumption curve, and Engel curve.</p> <p>* Price effect - Income and Substitution effect (Hicks and Slutsky), inferior goods and Giffen goods, Marshallian and compensated demand curve</p>	1		completion of the course)
				2		
II	CC III Introductory Macroeconomics	Unit 1 National Income Accounting	<p>*Macroeconomic data- Basic concepts of National Income accounting. The circular flow.</p> <p>*Concepts of GNP, GDP, NNP, and NDP at market price and at factor cost.</p> <p>* The measurement of the National Income-Value Added Method and Expenditure Method. The problem of double counting.</p> <p>*The role of Government. Concepts of Corporate Income, Corporate Savings, Personal Income, Personal Disposable Income and</p>	3	<p>Students learn to use national income accounting to assess and compare living standards across different regions and countries. They understand how measures such as GDP per capita can provide insight into the material well-being and quality of life of a population.</p> <p>Learners will be able to explore the classical view of the market as self – regulating and this automatic mechanism will lead to full employment</p>	Few MCQs were given for doubt clearance.
				4		
				4		

			<p>Personal Savings. Saving-Investment gap and its relation with budget deficit and trade surplus.</p> <p>*National Income accounting and cost of living. Basic idea of India's national income</p> <p>*Basic ideas of Classical Macroeconomics; Say's Law and Quantity Theory of Money, Loanable fund theory;</p> <p>*The Classical Theory of Income and Employment determination; full Employment and wage-price flexibility; Classical Dichotomy and Neutrality of Money.</p> <p>*The bond market as the mirror image of the money market-the Walras' Law.</p>	<p>4</p> <p>6</p> <p>4</p>	<p>equilibrium. By learning about the Quantity theory of money they develop the idea that inflation is sometimes a monetary phenomenon.</p> <p>Students will be able to connect the link between the bond market and the money market under Walras Law. Students can evaluate the implication of the acceleration principle for economic policies.</p>	<p>To draw the real sector in the classical model.</p>
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		Unit 4 Macroeconomic Foundations -I	<p>*Relationship between bond price and rate of interest- the concept of Keynesian liquidity preference schedule-speculative demand for money and liquidity trap.</p> <p>*Investment function: Concepts of Marginal productivity of capital, the marginal efficiency of capital (MEC) and the marginal efficiency of investment (MEI)-</p> <p>* Jorgenson's neo-classical theory- Acceleration principle- fixed and variable. Multiplier-accelerator interaction</p>	6		Short questions are given.
				5		(A class test of one hour duration will be conducted after completion of the course)
				6		
III	CC V Intermediate Microeconomics – I	Unit 1 Theories of Consumer Behaviour and Applications	<p>*Inter-temporal choice (saving and borrowing)</p> <p>*Revealed preference.</p> <p>*Choice under uncertainty – utility function and expected utility, risk aversion, and risk preference.</p> <p>* Applications of Consumer Behaviour in Construction of Price Indices – Laspeyers and Paasche's indices 2.</p>	4	Students can understand different strategies firms or individual adopts to mitigate risk. They understand how revealed preference theory is used to test the consistency and rationality of an individual's choices over time.	Simple sums on revealed preference and choice under uncertainty were given.
				4		
				6		

	CC VI Intermediate Macroeconomics-I	Unit 2 Aggregate Demand and Aggregate Supply- The Complete Keynesian Model	<p>*Derivation of aggregate demand curve. Derivation of aggregate supply curves both in the presence and absence of wage rigidity.</p> <p>* Equilibrium, stability, and comparative statics-effects of monetary and fiscal policies. Effects of wage cut.</p> <p>* Unemployment equilibrium and its causes-possible solutions including real balance effect.</p>	<p>5</p> <p>4</p> <p>4</p>	A comprehensive understanding of macroeconomic equilibrium is developed. Students were able to understand the process of income determination in complete Keynesian model with Ad-AS tools.	Diagrams of the comparative static effects of monetary and fiscal policies were given.
		Unit 3 Keynes vs. Classics	<p>*Keynesian vs classical system. Hybrid models under Classical/Keynesian framework.</p> <p>*Friedman's restatement of classical idea.</p>	<p>7</p> <p>3</p>	Students will be able to understand the strengths and weaknesses of both systems.	Exercise is given to write the basic difference between classical and Keynesian system.
		Unit 4 Money Supply, Monetary Policy, and Government Budgetary Operations	<p>*Measures of money supply with special reference to India (M1,M2, M3 and M4) Balance sheet view of money supplied by the banking sector as a whole.</p> <p>*High powered money – definition • Balance sheet of</p>	<p>3</p> <p>3</p>	One can assess the level of liquidity in the economy, monitor inflationary pressures and identify potential risks to financial stability. Students will learn that bank is the sole financial Institution that can create credit, hence	Simple numerical exercises on money multiplier, credit multiplier is given.

			<p>Reserve Bank of India and High powered money .</p> <p>* Balance sheet of Commercial banks and basic ideas of money multiplier theory. • Deposit multiplier, currency multiplier, reserve multiplier, credit multiplier and money multiplier in the context of the theory of money supply .</p> <p>* Interest sensitivity of money supply and the slope of the LM curve Monetary policy – Open Market Operations, Statutory Liquidity Ratio, Bank rate, variable reserve ratio, repo rate.</p> <p>*Government Budget Deficit and Deficit Financing-Indian illustration. Deficit financing and monetary policy.</p>	<p>6</p> <p>4</p> <p>4</p>	<p>can multiply money supply via money multiplier.</p>	
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		Unit 5 Inflation, Unemployment and Expectations	<p>*The concept of Inflationary Gap. • Demand pull vs. Cost push inflation • Mark-up inflation • The concept of stagflation.</p> <p>* Central Bank's role in controlling inflation: Monetary policy. Inflation and unemployment trade-off.</p> <p>* Four models of aggregate supply: The Sticky-Wage Model, The Worker-Misperception Model, The Imperfect Information Model, and The Sticky-Price Model.</p> <p>* Deriving the Phillips Curve from the Aggregate Supply Curve. Short-run and long-run Phillips curve – role of adaptive expectations and rational expectations. Disinflation, Sacrifice Ratio, and policy ineffectiveness.</p>	<p>5</p> <p>5</p> <p>5</p> <p>5</p>	<p>Helps in developing insight into the inflation-unemployment relationship via the Phillips curve. They will be able to analyze the reasons behind the positively sloped supply curve under different market conditions. Above all, one can understand that rational expectations can bring painless disinflation.</p>	<p>Short questions were given.</p> <p>Text book end questions on Phillips curve is given as exercise.</p> <p>(A class test of one hour duration will be conducted after completion of the course)</p>
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	CC VII Statistical Methods for Economics	Unit 3 Elementary Probability Theory	<p>*Sample spaces and events (concepts and definitions using set theory). * Axiomatic definition of probability and properties, theorem of total probability.</p> <p>* Conditional probability, theorem of compound probability.</p> <p>* Bayes' theorem and its applications.</p>	<p>3</p> <p>3</p> <p>3</p> <p>3</p>	Studying Probability theory fosters critical thinking skills by encouraging individuals to evaluate evidence, assess uncertainty and draw logical conclusions.	Problems of probability were given.
	SEC A(1) Data Analysis	Unit 2 Indian Official Statistics (Basic Concepts)	* National Sample Survey Office (NSSO) – Household Consumer Expenditure Survey Rounds, Employment and Unemployment Survey Rounds.	4	Students gain the knowledge of how to analyze socio-economic trends including income, consumption, education, health, etc. with the help of NSSO data.	
IV	CC VIII	Unit 3 General Equilibrium,	*General Equilibrium and Economic Efficiency-Exchange, production and	10	Students will understand the tradeoff between efficiency and equity. By	

	Intermediate Microeconomics II	Efficiency, and Welfare	<p>welfare, Pareto Optimality, Edgeworth box and contract curve.</p> <p>* Pareto efficiency and perfect competition, Reasons for Market failure, Pareto efficiency and market failure (externalities and public goods), property rights, and Coase Theorem.</p> <p>*Markets with asymmetric information-adverse selection, moral hazards, agency problems (concepts only</p>	<p>10</p> <p>5</p>	<p>learning about market failures, and externalities they can develop policy recommendations to address the problem of inefficiencies.</p>	<p>Short questions were given.</p>
	CC IX Intermediate Macroeconomics II	Unit 3 Economic Growth	<p>*Demand for money</p> <p>* Harrod and Domar models of economic growth.</p> <p>* Solow one sector growth model-golden rule- -dynamic efficiency.</p> <p>* Technological progress</p> <p>*Elements of endogenous growth theory-basic ideas-the AK model</p>	<p>5</p> <p>12</p> <p>12</p> <p>8</p> <p>10</p>	<p>A deeper understanding will develop regarding the factors influencing growth for example capital accumulation, technological progress, human capital development etc. They can apply their knowledge in predicting future growth trends.</p>	
	CC X Introductory Econometrics	Unit 1 Nature and Scope of Econometrics	<p>*Distinction between Economic Model and Econometric model Concept of stochastic relation, Role</p>	<p>8</p>	<p>Econometric models based on classical linear regression framework allow students to test</p>	<p>Problems on econometrics were given.</p>

		Unit 2 Classical Linear Regression Model (Simple linear regression and multiple linear regression)	<p>of random disturbance in the econometric model. Application of Econometrics in different branches of social science.</p> <p>* The classical assumptions (basic interpretation). Concepts of population regression function and sample regression function.</p>	12	<p>economic theories using empirical data.</p> <p>CLRM can be used by the students for forecasting and prediction of future outcomes.</p>	
	SEC B(1) Research Methodology	<p>Unit 1 Methodological Issues</p> <p>Unit 2 Methodological Issues</p>	<p>*Locating the basic issues-theme-based literature survey and motivation behind any study.</p> <p>*objectives of the study development of writing skills • Designing the sampling frame in case of field survey- the role of a pilot survey</p> <p>*The role of random numbers in drawing a random sample * Methods behind the preparation of questionnaire in case of field survey, Data entry after field survey • Tabular representation of</p>	<p>2</p> <p>2</p> <p>2</p>	<p>Students learn to critically appraise research studies, and identify methodological strengths and weaknesses of research findings. They learn to prepare questionnaires, methods of collecting samples, sample designing, and interpretation of data.</p>	Exercises on reviewing a journal article are given.

			data and graphs for data interpretation. * Theoretical and Empirical Research in Economics. Common sections of an ideal research paper in Economic	2		
V	CC XI International Economics	Unit 5 Trade Policy	*Partial Equilibrium Analysis of Tariff - cost–benefit, Quota, Quota- Tariff equivalence & nonequivalence, monopoly effects of quota, subsidy, and voluntary export restraint. * General Equilibrium Analysis- the distinction between large and small economies, welfare effects of a tariff on small country and large country. * Tariff-ridden offer curve, Tariff war, Optimum tariff for large economy, Metzler’s Paradox	5 5 2	Students learn about the purpose, design, and effects of each policy and their role in shaping international trade. They also learn how the optimum tariff rate is decided for different countries. In the general equilibrium framework, they also understand how tariff causes a decrease in welfare especially for small countries.	A class test of one-hour duration will be conducted after completion of the allocated syllabus.
	CC XII Indian Economy	Unit 1 Economic Development Since Independence	*Growth and development under different policy regimes (from planning to market-based development)	4	It gives a comprehensive idea of different policies adopted during the planning period. The first	2 marks questions are given.

			<p>- Objectives, achievements, and failures of Planning.</p> <p>*Economic crisis during the late 1980s.</p> <p>*Economic Reforms – Critical Analysis Structural changes in the post-reforms period</p> <p>*Regional variation of growth and development.</p>	<p>4</p> <p>5</p> <p>5</p>	<p>three five-year plans are different from the rest of the plans because it is based on the principle of the socialistic pattern of society. In the post-reform period market market-driven policies were given priority.</p>	
	DSE A(1).2 Economic History of India (1857-1947)	<p>Unit1 Impact of British rule on India</p> <p>Unit 2 Aspects of Economic Policies in British India</p>	<p>*Deindustrialization</p> <p>*Commercialization of agriculture</p> <p>* Economic Drain.</p> <p>*Land policy, Policy of Discriminating Protection</p> <p>*Early Industrial Development and Managing Agency System</p> <p>*Currency and monetary policy</p> <p>*Development of infrastructure – Railway</p>	<p>10</p> <p>10</p> <p>12</p> <p>10</p> <p>10</p> <p>10</p> <p>12</p>	<p>Students learned the transformation of the agrarian economy from subsistence farming to cash crop cultivation. De-industrialization and drain theory help them to understand the history of exploitations by the Britishers and how resources were channeled by them to enrich their self-interest.</p> <p>The development of Railways is a landmark in Indian Economic History. Students will learn the different phases of its</p>	

					development. They will also understand the reasons behind the evolution of Gold currency standards, Managing Agency systems, and so on.	
	DSE B(1) Financial Economics	Unit 1 Investment Theory and Portfolio Analysis	*Deterministic cash-flow streams: Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunization; the term structure of interest rates; yield curves; spot rates and forward rates.	15	They will learn about the important tools like PV, and IRR in investment analysis and decision making. They will understand the concepts of fixed-income markets like yield curves, Spot rates. cash flow.	Few sums were given.
VI	CC XIII Public Economics	Unit 1 Government in a Market Economy	*Market failure and externalities; public and merit goods; *Government intervention; * Public Expenditure for financing development	5 6	By studying market failure, individuals can comprehend the conditions under which markets may not allocate resources efficiently. This understanding is crucial for policymakers, economists, and business leaders to identify instances where intervention may be	Short and medium-type questions are given. (A class test of one hour duration will be conducted after completion of the allocated syllabus)
		Unit 3 The Revenue and	*Classification of Taxes; Canons of Taxation; Principles of Taxation -	8		

		Expenditure of the Government	<p>Benefit Principle, Equal Sacrifice Principle, Ability to Pay Principle; Incidence and Burden of Taxes;</p> <p>*Effects of taxation on income distribution, work efforts, and savings, The Laffer curve; Comparison between direct and indirect taxes – income and substitution effects; Optimal Taxation</p>	8	<p>necessary to improve overall economic welfare.</p> <p>Externalities often lead to market distortions, where prices do not reflect the full social costs or benefits of goods and services. Learning about externalities in public finance helps individuals understand how taxation policies, such as Pigovian taxes, can internalize external costs and benefits, leading to more efficient resource allocation.</p>	
	CC XIV Development Economics	Unit 1 Meaning of Economic Development	<p>*Income Approach and Capability Approach, Construction and interpretation of HDI;</p> <p>*international variations in development measures; comparing development trajectories across nations and within them.</p> <p>* Dependency school of development.</p>	<p>5</p> <p>2</p> <p>3</p>	<p>Students will understand the difference between the income approach and the capability approach of development. The capability approach highlights the importance of expanding individuals' capabilities and freedoms to lead lives they value, whereas the income approach primarily focuses on economic indicators and monetary</p>	Long questions were given.

					wealth as measures of development.	
		Unit 6 Political Institutions and the State	*Definition of institutions, Evolution of Political and Economic Institutions. The determinants of democracy. *Alternative institutional trajectories and their relationship with economic performance. *Within-country differences in the functioning of state institutions. State ownership and regulation. Government failures and corruption	4 5 5	They have learned the evolution of different political institutions and what are the crucial factors for good governance. They will be able to highlight the reasons behind Government Failure and will try to frame policy recommendations to correct corruption and red tape.	Long questions were given for practice. (A class test of one hour duration will be conducted after completion of the allocated syllabus)
	DSE A(2).1 Money and Financial Markets	Unit 3 Financial Markets and Interest Rates Behaviour.	*Determination; sources of interest rate differentials; *Theories of term structure of interest rates; interest rates in India	9 6	By learning about interest rate differentials and term structure theories, individuals can explore strategies such as yield curve positioning, duration management, and interest rate swaps to mitigate interest rate risk, optimize portfolio returns, and enhance financial resilience.	A few short notes were given.
	DSE- B(2) Environmental Economics	Unit 5 Measuring the Values of Environmental	Direct and Indirect Methods of Valuation – Contingent valuation, Travel Cost, hedonic Pricing – basic concepts only (no	8	Individuals equipped with knowledge of valuation methods can make informed decisions regarding environmental	Short questions on concepts are discussed.

		Costs and Benefits	econometric techniques) – when they should be used, what are the advantages and disadvantages of these methods		policies, resource management, and sustainable development. They can assess the economic implications of different options and choose the most socially beneficial course of action.	
	DSE B(2).2 Issues in Development Economics	Unit 2 Land, Labor, and Credit market.	<p>*The distribution of land ownership; land reform and its effects on productivity.</p> <p>* Contractual relationships between tenants and landlords Land acquisition; nutrition and labor productivity informational problems and credit contract</p> <p>* Microfinance, Inter-linkages between rural factor markets</p>	<p>5</p> <p>5</p> <p>5</p>	<p>Learning about land, labor, and credit markets yields several significant outcomes.</p> <p>Students understand how these markets allocate scarce resources efficiently. It provides insights regarding the design and implementation of policies aimed at promoting economic development, social inclusion, and financial stability.</p>	Short and medium questions were given.
I	GE I Introductory Microeconomics	Unit 3 The Households	*Utility maximization-the cardinal approach. Total utility and marginal utility-law of diminishing marginal utility-relation between the law of demand and law of diminishing marginal utility.	4	<div>concepts of optimum choice, the price consumption curve, and the income consumption curve are central to understanding consumer behavior and decision-</div>	

			<p>Utility maximization ordinal approach.</p> <p>*Consumption decision and the budget constraint, consumption and income/price changes, description of preferences (representing preferences with indifference curves);</p> <p>*properties of indifference curves; consumer's optimum choice; the price consumption curve and the income consumption curve.</p> <p>*derivation of the demand curve from price consumption curve; income and substitution effects</p>	<p>4</p> <p>4</p> <p>4</p>	<p>making in microeconomics. They provide insights into how consumers allocate their limited income among different goods and how changes in prices and income influence consumption patterns.</p>	
II	GE II Introductory Macroeconomics	Unit 3 The Classical System	<p>*Basic ideas of the classical system, Law, and Quantity Theory of Money.</p> <p>*classical theory of income and employment determination</p>	<p>7</p> <p>8</p>	<p>They understand that classical theory provided valuable insights into economic behavior and laid the foundation for modern economics, Keynes's challenged many of the assumptions of classical economics, especially regarding the possibility of full</p>	

					employment equilibrium and wage-price flexibility.	
		Unit 4 Money Supply and Money Demand	*Supply of money *demand for money	6 6		(A class test of one hour duration will be conducted after completion of the allocated syllabus)
III	GE III Issues in Economic Development and India	Unit 1 Meaning of Economic Development 25 lecture hours	*Meaning of economic development; growth vs. development; concept of human development and its measurement, population and human development; *education and health sectors in India; features and causes of underdevelopment of the Indian economy; *growth and development of the Indian economy under different policy regimes	5 5 8	Students will understand that economic development encompasses not only economic growth but also broader objectives such as poverty reduction, social inclusion, environmental sustainability, and the expansion of human capabilities. Human development emphasizes the importance of improving people's lives and expanding their opportunities while considering factors beyond traditional economic measures.	
IV	GE IV Indian Economic Policies	Unit 3 Policies and Performance in Industry	Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment.	18	They learn the importance of fostering productivity, promoting diversification, supporting small-scale industries, managing the public sector, ensuring	

					competition, and attracting foreign investment to achieve sustainable and inclusive economic growth.	
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Lesson Plan - Prof. Ranjini Lahiri

CBCS

Semester	Paper	Unit	Sub-Topics	No. of Lectures	Outcomes	Class Exercises
I	CC I Introductory Microeconomics	Unit 2 Demand and Supply: How Markets Work	2.1 - Elementary theory of Demand: Determinants of household demand and market demand, movement along and shift of the demand curve	4	Enhanced understanding of the fundamental forces driving market dynamics, allowing students to analyze the behavior of buyers and sellers in various economic contexts. Improved ability to interpret and predict changes in market equilibrium resulting from shifts in demand or supply, fostering critical thinking about market responses to economic shocks and policy interventions	Short questions on the given concept.
			2.2 - Elementary theory of Supply: factors influencing supply, the supply curve, movement along and shift of the supply curve	3		
			2.3 - The Elementary theory of market price: Determination of equilibrium price in a competitive market.	3		
			2.4 - Market Adjustment without Government (with illustrations): the effect of shifts in demand and Supply	3		

		Unit 4 Market Sensitivity and Elasticity	<p>4.1- Importance of Elasticity in Choice-Decisions</p> <p>4.2- Method of Calculation- Arc Elasticity, Point Elasticity-definition</p> <p>4.3- Demand and supply Elasticities-types of elasticity and factors affecting elasticity, Demand Elasticity and Revenue, Long run and Short run elasticities of Demand and Supply</p> <p>4.4- Income and Cross-Price Elasticity</p> <p>4.5- Applications: Case studies – OPEC and Oil Prices, Illegal Drugs</p>	<p>2</p> <p>2</p> <p>6</p> <p>3</p> <p>3</p>	<p>Enhanced comprehension of how changes in price and quantity affect consumer and producer behavior, allowing students to analyze market responsiveness to price changes.</p> <p>Improved ability to assess the sensitivity of quantity demanded or supplied to changes in factors such as price, income, or cross-price, enabling informed decision-making in business strategy and policy formulation.</p>	<p>Numerical problems given.</p>
		Unit 5 Government Intervention	<p>5.1- The Economic Role of Government with respect to Market: (i) Price Ceiling, Price Floor and Market Adjustment (with short case studies of agricultural administered price, minimum wage and</p>	<p>5</p>	<p>Increased understanding of how government intervention influences market outcomes through policies such as taxation, regulation, and</p>	<p>Students were asked to write answers using diagrams.</p> <p>(A class test of one hour duration was</p>

			<p>rent control); (ii) Black Market; (iii) Tax and market adjustment ; (iv) Elasticity and tax incidence</p> <p>5.2- Comparison of markets with and without government</p>	3	<p>provision of public goods.</p> <p>Enhanced ability to analyze the effectiveness and efficiency of government interventions in correcting market failures, redistributing income, and promoting economic stability and growth.</p> <p>Development of critical thinking skills to evaluate the trade-offs between market efficiency and equity objectives, empowering students to contribute to informed discussions on economic policy and governance</p>	conducted after completion of the allocated syllabus)
II	CC III Introductory Macroeconomics	Unit 2 Income Determination in the Short Run	<p>-The Simple Keynesian Model (SKM) in a Closed Economy without Government-</p> <p>-The Keynesian</p>	<p>4</p> <p>5</p>	<p>Improved understanding of the relationship between aggregate demand, output, and employment in the short run, emphasizing the role of</p>	Short questions are discussed.

			<p>Consumption Function; the Keynesian Saving Function</p> <p>-Income determination in SKM; stability of equilibrium;</p> <p>-The concept of effective demand- the concept of demand-determined output</p> <p>-The Simple Keynesian Multiplier; the paradox of thrift;</p> <p>-The SKM in a Closed Economy with Government; government expenditure and tax; the government expenditure multiplier and the tax rate multiplier; the balanced budget multiplier; the budget surplus; effects of tax changes and government purchases on budget surplus; the full employment budget surplus.</p>	<p>4</p> <p>4</p> <p>3</p> <p>8</p>	<p>government intervention in stabilizing the economy.</p> <p>Enhanced ability to analyze the impact of fiscal policy tools such as government spending and taxation on aggregate demand, output levels, and economic equilibrium.</p> <p>Development of analytical skills to evaluate the effectiveness and limitations of Keynesian policies in addressing cyclical fluctuations and promoting macroeconomic stability</p>	
III	CC V Intermediate Microeconomics I	Unit 2 Production and Costs	2.1- Technology – general concept of Production Function, production with one and two variable	10	Increased comprehension of how firms make production decisions to maximize	Numerical problems and mathematical derivations .

			<p>inputs, total average and marginal products, short run and long run, returns to factor and returns to scale, Isoquants, marginal rate of technical substitution, isocost line and firm's equilibrium, elasticity of substitution</p> <p>2.2- Types of production functions- Cobb-Douglas, fixed-coefficient and CES functions</p> <p>2.3- Cost structure- implicit cost, explicit cost, accounting cost, sunk cost, economic cost, fixed cost, variable cost, total, average and marginal cost. Determinants of short run cost, cost curves, cost minimization and expansion path, short versus long run cost curves, economies of scale.</p>	<p>4</p> <p>8</p>	<p>profits, considering factors such as input usage, technology, and scale of operations.</p> <p>Enhanced ability to analyze the relationship between input costs, output levels, and firm profitability.</p> <p>Development of critical thinking skills to evaluate the efficiency of production processes and understand economies of scale.</p>	
		Unit 3 The Firm and Perfect Market Structure	<p>3.1- Organization, Firms and Profit Maximization</p>	<p>4</p> <p>2</p>	<p>- Improved understanding of the behavior and objectives of firms as profit-maximizing entities</p>	Class tests taken on short answer type questions.

			<p>3.2- Marginal Revenue, Marginal Cost and Profit Maximization</p> <p>3.3- Perfect competition- short run competitive equilibrium of the firm, short-run supply curve of a firm and industry, Output choice and competitive equilibrium in the long run, Economic rent and profit, long-run industry supply- constant, increasing, and decreasing cost.</p> <p>3.4- Consumer and Producer surplus, welfare, and efficiency of competitive equilibrium. Government intervention and deadweight loss, Application- Minimum prices and price supports (price ceiling and price floors)</p>	<p>6</p> <p>6</p>	<p>within competitive markets.</p> <p>- Development of critical thinking skills to evaluate the efficiency and welfare implications of perfect competition, including its impact on consumer surplus, producer surplus, and market equilibrium.</p> <p>- Increased understanding of how consumers and producers benefit from voluntary exchanges in markets, as reflected by the concepts of surplus.</p> <p>-Enhanced ability to analyze the efficiency of market outcomes by assessing the magnitude of deadweight loss.</p> <p>- Development of critical thinking skills to evaluate the welfare implications of</p>	
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					government interventions or market failures, helping students assess the trade-offs involved in policy decisions	
		Unit 4 Input Market in Perfect Competition	<p>4.1- Basic concepts- derived demand, the productivity of an input, the marginal product of an input, marginal revenue product</p> <p>4.2- Marginal productivity theory of distribution</p> <p>4.3- Labor market-supply of labor, competitive labor markets</p> <p>4.4- Land markets and rent</p>	<p>8</p> <p>4</p> <p>4</p> <p>4</p>	<p>-Increased comprehension of how changes in consumer demand and market conditions affect the demand for labor, enabling students to analyze employment trends and labor market dynamics.</p> <p>-Enhanced ability to analyze income distribution, wage determination, and resource allocation in various industries.</p>	<p>Short and medium questions were discussed.</p> <p>(A class test of one hour duration was conducted after completion of the allocated syllabus)</p>
	CC VI Intermediate Macroeconomics I	Unit 1 The IS-LM Model	<p>-IS-LM Model</p> <p>- equilibrium, stability, and comparative statics.</p> <p>-Crowding out and effects of fiscal and monetary policies.</p>	<p>5</p> <p>5</p> <p>5</p>	<p>- Enhanced understanding of how changes in fiscal and monetary policies influence aggregate demand, output, and interest rates in the short run.</p>	Mathematical and diagrammatic practice done.

					<p>- Improved ability to analyze the interactions between the goods market and money market and their implications for macroeconomic equilibrium.</p> <p>- Development of critical thinking skills to assess the potential crowding out effect, where increased government spending leads to higher interest rates, reducing private investment, and its impact on overall economic stability and growth.</p>	
IV	CC VIII Intermediate Microeconomics II	Unit 1 Imperfect Market Structure	<p>-Monopoly and barriers to entry- output determination and price rule, measure and sources of monopoly power, social costs of monopoly power weight loss</p> <p>- Pricing with market power- first, second and third-degree price discrimination, multiplant</p>	<p>12</p> <p>8</p>	<p>-Enhanced ability to analyze the efficiency and equity implications of monopolistic behavior.</p> <p>-Improved understanding of how firms in monopolistically competitive markets</p>	Class tests on diagrammatic expositions were conducted.

			<p>Monopoly</p> <p>- Monopolistic competition- short-run and long-run equilibrium, excess capacity</p> <p>- Oligopoly- Oligopoly equilibrium as Nash equilibrium, Cournot, Bertrand and Stackelberg Model- use of isoprofit curves and simple game-theoretic interpretation. Sweezy's kinked demand curve model and non-collusive equilibrium. Competition versus collusion- the Prisoners' Dilemma. Collusive Oligopoly –Cartels and Price Leadership.</p>	<p>8</p> <p>12</p>	<p>compete and the challenges and opportunities presented by product differentiation.</p> <p>-Development of analytical skills to analyze strategic interactions among firms, evaluate the implications of different market structures for pricing and output decisions, and understand the role of collusion, competition, and government regulation in oligopolistic markets.</p>	
		Unit 2 Input Market Under Imperfect Competition	2.1 Monopsony, bilateral monopoly in labour market	8	- Enhanced understanding of the strategic interactions between a monopsonistic employer and a monopolistic labor union, and its implications for wages, employment, and	<p>Answers with diagrams were practiced.</p> <p>(A class test of one hour duration was conducted after completion of</p>

					welfare in the labor market.	the allocated syllabus)
V	CCXI International Economics	Unit 1 Absolute and Comparative Advantages of Trade	<ul style="list-style-type: none"> - Adam Smith's theory of absolute advantage. - David Ricardo's theory of comparative advantage. - Arbitrage as the basis and direction of trade; fundamental sources of cross-country price differences and arbitrage. - One factor economy, production possibility frontier, relative demand and relative supply, terms of trade, trade in the Ricardian world, determination of intermediate TOT, complete vs incomplete specialization, complete specialization, and gains from trade. 	<p>1</p> <p>2</p> <p>2</p> <p>5</p>	<ul style="list-style-type: none"> - Enhanced understanding of how countries can increase their output by specializing in producing goods they can produce more efficiently than others. - Improved comprehension of how countries benefit from specializing in producing goods with lower opportunity costs. - Development of analytical skills to identify and exploit price discrepancies between markets, leading to more efficient resource allocation and risk-free profit opportunities. 	Descriptive long answer type questions with examples were discussed.

			<p>derivation of trade indifference curves, properties of trade indifference map, Offer curves and its properties. Three important elasticities- the elasticity of offer curves, the elasticity of demand for imports, the elasticity of supply of exports. International equilibrium and offer curves, terms of trade (TOT) and stability, the Marshall-Lerner condition,</p> <p>- Gains from Trade (GFT) theorem, illustration of GFT, decomposition of GFT, substitution possibilities and magnitude of GFT</p> <p>- Production structure for neo-classical trade models, role of constant returns to scale, the concept of unit isoquants, duality in the production structure, and significance of the envelope condition in trade models.</p>	<p>4</p> <p>3</p>	<p>- Enhanced ability to evaluate the trade-offs and welfare effects of international trade on a nation's economy.</p> <p>- Increased comprehension of a nation's trade possibilities and exchange rate dynamics in the context of international trade.</p> <p>- Development of analytical skills to assess the mutual benefits and efficiency gains arising from specialization and trade between nations.</p>	
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	CC XII Indian Economy	Unit 4 Population and Human Development	-Demographic trends -Education and health- problems and government measures -Right to Education Act	8 6 4	Students will acquire knowledge of the demographic structures of India, education, and health prospects.	Class presentations were arranged.
VI	CC XIII Public Economics	Unit 3 The Revenue and Expenditure of the Government	-Classification of taxes. Canons of taxation. -Principles of taxation. -Incidence of burden of taxes	6 5 5	- Increased understanding of the various types of taxes and their specific characteristics. = Enhanced ability to evaluate tax systems based on principles of equity, efficiency, simplicity, and adequacy. - Development of critical thinking skills to assess the economic rationale behind taxation, including the concepts of ability to pay, benefit principle, and neutrality. - Improved comprehension of how taxes impact individuals, businesses,	Short and medium questions were given.

					and the economy as a whole, facilitating analysis of tax fairness, efficiency, and distributional effects.	
	CC XIV Development Economics	Unit 3 Dual Economy Models	<p>-The concept of surplus labour and disguised unemployment.</p> <p>-dualism</p> <p>-Lewis model</p> <p>-Haris-atodaro model</p>	<p>3</p> <p>2</p> <p>3</p> <p>4</p>	<p>- Enhanced understanding of surplus labor's impact on economic efficiency and development, facilitating analysis of labor market dynamics.</p> <p>- Improved ability to recognize disguised unemployment and assess its implications for resource allocation and productivity.</p> <p>- Increased comprehension of dualistic economic development and its implications for structural transformation and income distribution, providing insights into growth strategies for developing economies.</p>	Long descriptive questions were given.

					- Developed analytical skills to evaluate rural-urban migration patterns, unemployment dynamics, and policy interventions in developing countries, enabling informed discussions on poverty alleviation and urbanization strategies.	
	DSE A(2).1 Money and Financial markets	Unit 1 Introduction to Money and Banking	<p>Introduction to money and Money and Banking</p> <p>-concept, functions, measurement</p> <p>-Theories of money supply determination.</p>	<p>3</p> <p>4</p> <p>5</p>	<p>- Increased understanding of the functions and importance of money as a medium of exchange, unit of account, and store of value.</p> <p>- Enhanced comprehension of the role of banking institutions in facilitating financial transactions.</p> <p>- Development of analytical skills to evaluate the impact of monetary policy on interest rates, inflation,</p>	Tests on short questions were taken.

					and overall economic stability.	
		Unit 5 Central Banking and Monetary Policy	<p>Central Banking and monetary policy -functions, balance sheet, goals, targets and instruments of monetary control</p> <p>-monetary management</p> <p>-current monetary policy of India</p>	<p>8</p> <p>5</p> <p>4</p>	<p>- Increased ability to analyze financial statements and make informed decisions regarding investment, financing, and strategic planning.</p> <p>- Enhanced understanding of the mechanisms through which monetary policy affects inflation, employment, and economic growth.</p> <p>- Improved ability to evaluate the effectiveness of monetary policy measures in achieving macroeconomic objectives such as price stability and full employment.</p> <p>- Enhanced awareness of the Reserve Bank of India's monetary policy decisions and their</p>	Medium questions were given.

					implications for financial markets, business conditions, and overall economic performance.	
	DSE B(2).1 Environmental Economics	Unit 1 Introduction	-Introduction -Interlinkages between the economy and environment	5 6	- Increased awareness of the economic value of environmental resources, enabling informed decision-making regarding environmental policies, conservation efforts, and sustainable practices.	Short questions were given.
		Unit 5 Measuring the Values of Environmental Costs and Benefits	Concepts of willingness to pay (WTP) and willingness to accept compensation (WTAC)	8	- Enhanced ability to conduct cost-benefit analyses, evaluate environmental policies, and make informed decisions considering individual preferences and societal welfare. - Improved understanding of negotiation strategies, resource allocation decisions, and policy implications concerning property rights and economic efficiency.	Conceptual questions were asked.

	DSE B(2).2 Issues in Development Economics	Unit 1 Demography and Development	<p>-Demographic concepts</p> <p>-Demographic transition during development, gender bias in preferences & outcomes, evidence of unequal treatment within households</p> <p>-Connections between income, mortality, fertility choices and human capital accumulation</p> <p>-Migration</p>	<p>2</p> <p>5</p> <p>5</p> <p>3</p>	<p>- Enhanced ability to analyze population trends, dynamics, and their implications for social and economic development.</p> <p>- Improved understanding of how socio-economic factors influence demographic patterns and disparities, enabling informed policy interventions to address gender inequalities and promote equitable development.</p> <p>- Enhanced comprehension of how income levels, mortality rates, and fertility decisions shape long-term economic outcomes and societal well-being, aiding in the design of effective social and economic policies.</p>	Conceptual questions were discussed.
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					- Increased understanding of the economic, social, and political implications of migration, and its role in shaping labor markets, cultural diversity, and development trajectories worldwide.	
I	GE I Introductory Microeconomics	Unit 2 Supply and Demand	-Determinants of individual demand /supply	2	Enhanced understanding of the fundamental forces driving market dynamics, allowing students to analyze the behavior of buyers and sellers in various economic contexts.	(A class test of one-hour duration was conducted after completion of the allocated syllabus)
			-Demand/Supply curves	1		
			-Law of Demand/ Law of Supply	2		
			-shifts of the curves	2		
			-Elasticities. Applications of elasticities.	2		
			-controls on prices, taxes, consumer surplus, and producer surplus.	3		
					Improved ability to interpret and predict changes in market equilibrium resulting from shifts in demand or supply, fostering critical thinking about market responses to economic shocks and policy interventions	

II	GE II Introductory Macroeconomics	Unit 2 The simple Keynesian model in a closed economy	-The Keynesian Consumption and Saving functions	2	Improved understanding of the relationship between aggregate demand, output, and employment in the short run, emphasizing the role of government intervention in stabilizing the economy. Enhanced ability to analyze the impact of fiscal policy tools such as government spending and taxation on aggregate demand, output levels, and economic equilibrium. Development of analytical skills to evaluate the effectiveness and limitations of Keynesian policies in addressing cyclical fluctuations and promoting macroeconomic stability	(A class test of one-hour duration was conducted after completion of the allocated syllabus)
			-Income determination	2		
			-Effective demand	2		
			-Multiplier	3		
			-The role of government.	3		

III	GE III Issues in Economic Development and India	Unit 4 International Organizations and Economic Development	<p>-Functions of IMF and World Bank</p> <p>-WTO and its functions</p>	<p>9</p> <p>9</p>	<p>-Students will gain insights into the structure, functions, and roles of these international institutions in shaping global economic policies and governance.</p> <p>-They will learn the historical context and evolution of these institutions and their impact on the international economic system.</p>	
IV	GE IV Indian economic policies	Unit 4 Policies and performance in Indian foreign trade	<p>-change in volume and direction of India's foreign trade in the post-liberalization period.</p> <p>-BOP position of India in recent years</p> <p>-India's export and import policies</p>	<p>6</p> <p>4</p> <p>8</p>	<p>They learn the foreign trade policies, volume, and direction of foreign trade and the BOP position of India.</p>	

Lesson Plan - Prof. Sajal Jana

CBCS

Semester	Paper	Unit	Sub-Topics	No. of Lectures	Outcomes	Class Exercises
I	CC II Mathematical Methods in Economics	Unit 1 Preliminaries	* Sets and set operations; functions and their properties; number systems.	4	Students will learn to set operations.	Short questions on basic concepts are given.
			* Convex sets; geometric properties of functions: convex functions, their characterizations, properties and applications; further geometric properties of functions: quasi-convex functions, quasi-concave functions, their characterizations, properties, and applications	5	They will learn convex functions, their characterizations, properties and applications	
			*Limit and continuity- Different Limit Theorems with proof-concept of first principle.	4	They will practice sums on limits & Continuity	Objective questions were provided to solve.
		Unit 3 Single variable optimization	* Uses of the concept of continuity.			
			• Local and global optima; Geometric characterizations; characterizations using calculus.	6		

			<p>Significance of first and second-order conditions.</p> <ul style="list-style-type: none"> • Interpretation of necessary and sufficient conditions with examples. • Applications in Economics-profit maximization and cost minimization 	5	Students will adopt techniques to find out Local and global optima using calculus	
		Unit 5 Matrix Algebra	<ul style="list-style-type: none"> • Matrix: its elementary operations; different types of matrix. • Rank of a matrix. • Determinants and inverse of a square matrix. • Solution of system of linear equations-Cramer's rule; Eigen values and Eigen vectors. • System of nonlinear equations-Jacobian determinant and the existence of solution. • The concept of comparative statics • Applications of Matrix Algebra in input-output analysis-the Leontief Static Open Model (LSOM) - the Hawkins-Simon conditions. 	4 1 1 1 1 4	Students will adopt techniques to solve Matrix Algebra, Determinant, etc.	<p>Exercises based on Matrix Operations are given.</p> <p>(A class test of one hour duration is conducted after completion of the allocated syllabus)</p>
II	CC IV	Unit 1 Function of several variables	<ul style="list-style-type: none"> • Continuous and differentiable functions: partial derivatives and Hessian matrix. 	8	Students will acquire knowledge about the continuity	Numerical examples were

	Mathematical Methods in Economics-II		<p>Homogeneous and homothetic functions.</p> <ul style="list-style-type: none"> Euler's theorem, implicit function theorem (without proof), and its application to comparative statics problems. Economic applications- the idea of level curves, theories of consumer behaviour and theory of production. 	6	& differentiability of functions	provided to solve.
			<ul style="list-style-type: none"> Finite difference; Equations of first and 2nd orders and their solutions 	8	They will learn the applicability of different comparative static problems in economics	(A class test of one hour duration is conducted after completion of the allocated syllabus)
		Unit 3 Difference Equations	<ul style="list-style-type: none"> Application in Economics- Cobweb model, Multiplier-Accelerator model. 	8	The knowledge of various concepts related to consumer theory & Production theory will also be developed.	
				6	Students will learn the technique to solve the homogeneous & non-homogeneous difference equations	
					They will also learn the empirical application of homogeneous difference equations with the cobweb model.	

III	CC VII Statistical Methods for Economics	Unit 4 Probability Distributions	<ul style="list-style-type: none"> • Random variable (discrete and continuous) • Probability distributions (pmf, pdf. Distribution functions) • Expected values of random variables (mean, variance, raw moment, central moment, moment generating functions) • Properties of commonly used discrete and continuous distributions: Binomial -(derivation of pmf, mean, variance, moments, moment generating functions, problems) •Poisson - (derivation of pmf, mean, variance, moments, moment generating functions, 	<p>4</p> <p>4</p> <p>3</p>	<p>Students will learn various types of Probability distributions.</p> <p>They will have to learn the relationship between raw moments & central moments.</p>	<p>sums on Probability distribution were given.</p>

			<p>problems)</p> <p>Normal - (derivation of pdf, mean, variance, moments, moment generating functions, problems)</p> <ul style="list-style-type: none"> • Joint distribution functions of random variables (discrete and continuous) - joint pdf (pmf), marginal pdf (pmf), conditional pdf (pmf) 	3		
III		Unit 6 Statistical Inference	<ul style="list-style-type: none"> • Point Estimation-Properties of a good estimator; • Basic principles of Ordinary Least Square, Maximum Likelihood Method Method of Moments; • Interval estimation. • Testing of hypothesis (basic concepts of null hypothesis, alternative hypothesis, type I and Type II errors, power of a test, p-value) 	3 2 2 3	<p>Students will learn the techniques to estimate the parameters.</p> <p>The properties of a good estimator can be checked through the estimates obtained by OLS techniques.</p> <p>To be familiar with the basic concepts</p>	Numerical Examples were given.

					related to the testing of hypothesis	
III	SEC A(1) Data Analysis	Unit 1 Collection and representation of data	<ul style="list-style-type: none"> •Collection of data (some methodological issues) • Census •Sample survey •Representation of data •The basics of data management in Stata / R / Eviews / SPSS / MS Excel • Hands-on 	3 2 2 3 2 4	They will have to acquire knowledge about sampling surveys & handling of the dataset using various tools of statistical software. The sample survey techniques will enable them to collect primary data from respondents.	MCQ questions were provided & asked to solve them.
IV	CC X Introductory Econometrics	Unit 4 Statistical inference in linear regression model	<ul style="list-style-type: none"> •Use of standard normal, chi2, t, and F statistics in the linear regression model •Testing hypothesis Single test (t-test and chi2 test) Joint test (F test) •Goodness of fit (in terms of R2, adjusted R2, and F statistic), Analysis of Variance (ANOVA) •Statistical significance and economic importance 	9 12 3 2	The application of a Proper statistical test enables meaningful statistical decisions. Students will learn how to interpret the results of the regression model through the ANOVA model.	.Different Numerical Exercises were given & asked them to solve.

		Unit 6 Specification Analysis	<ul style="list-style-type: none"> •Omission of a relevant variable •Inclusion of irrelevant variable •Tests of specification errors •Testing for linearity and normality assumptions 	2 2 2 2	<p>Students will learn about the importance of relevant variables before incorporating them into the model.</p> <p>The correct specification of the model is very essential for policy formulation.</p>	Textbook end questions on specification errors are given as an exercise.
	SEC B(1) Research Methodology	Unit 2 Methodological Issues	<p>Role of footnotes or end notes in a research paper</p> <ul style="list-style-type: none"> • Bibliography, reference and citation •Writing the abstract of a research paper Keywords and JEL Classification • Presentation of a research paper through PowerPoint. Basic rules are to be followed for a good presentation. <p>Role of diagrams, graphs, pictures, and charts.</p>	4 4 2 2	<p>Students will learn the basic steps to write down a research project.</p> <p>They will also learn how to present a good research paper</p>	(A class test of one hour duration is conducted after completion of the allocated syllabus)
V	CC XI International Economics	Unit 3 Factor Endowment and Trade (Heckscher-	<ul style="list-style-type: none"> • Heckscher-Ohlin (HO)theorem and price vs physical definitions of relative factor abundance. 	3	Students will learn H-O theorem & its Related concepts.	Few Questions were given & finally

		Ohlin-Samuelson Model)	<ul style="list-style-type: none"> • Role of homotheticity of tastes in the context of physical definition • Factor Intensity Reversal in the context of price and physical definitions and invalidity of HO Theorem. • The Factor Price Equalization Theorem. Factor price equalization and complete specialization. • Incomplete Specialization, Factor price equalization and Factor Intensity Reversal • Empirical studies- Leontief Paradox. 	3 4 2		discussed among them.
V	CC XII Indian Economy	Unit 4 Economic Reforms in India	<ul style="list-style-type: none"> • Banking sector reforms • Reforms in tax policy • Reforms in the external sector • Reforms in Labour market 	5 5 5 3	Students will be aware of the different policies issued during the reform period.	Short questions were given.

V	DSE A1(1).1 Applied Econometrics	Unit 3 Regression Diagnostics and Specification	<ul style="list-style-type: none"> • Misspecification • Functional forms • Model selection • Application with Stata / R 	8 5 5 8	A deeper understanding will develop regarding the data misspecifications, model specifications, model selection, and hands-on training with STATA and R.	Short answer type questions were provided
	DSE B(1) Financial Economics	Unit 2 Options and Derivatives	<ul style="list-style-type: none"> • Derivatives • Options and futures • call and put options • Put-call parity 	4 4 4 3	Students will gather knowledge of derivatives and they will understand the concepts of call and put options.	Short answer type questions were provided
		Unit 3 Corporate Finance	<ul style="list-style-type: none"> • Patterns of corporate financing • capital structures • cost of capital Modigliani-Miller theorem 	5 3 4 3	Students will have a deep understanding of the theory of corporate finance, and the capital structure in the financial market.	Short answer type questions were provided
VI	CC XIII Public Economics	Unit 4 Public Finance	<ul style="list-style-type: none"> • Meaning and Classification of Public Expenditure - government budget and its types, government expenditure and tax multipliers, balanced budget multiplier 	6	Students will learn about balanced budget multiplier, Sources of Public Borrowings:	Short answer type questions were provided

			<ul style="list-style-type: none"> •International Trade and Environment – Pollution Havens • International Environmental Agreements – Basic idea about Montreal and Kyoto Protocol and Talks on Climate Change 	6 6	International Environmental Agreements	
	DSE B(2).2 Issues in Development Economics	Unit 4 Environment and Sustainable Development	<ul style="list-style-type: none"> • Defining sustainability for renewable resources • A brief history of environmental change; • Common-pool resources; • Environmental externalities and state regulation of the environment; • Market-based instruments, economic activity, and climate change. 	5 4 3 3	Students will have to learn about sustainability for renewable resources, Environmental externalities, and state regulation of the environment	MCQ questions were discussed
I	GE I Introductory Microeconomics	Unit 6 Input Markets	<ul style="list-style-type: none"> •The labour market - basic concepts - derived demand, productivity of an input; marginal productivity of labour, marginal revenue product); the land market-concepts of rent and quasi rent. • Basis of trade: concepts of absolute advantage and comparative advantage; 	16	Students will learn several aspects of labor markets.	Short questions on basic concepts are given.
II	GE II Introductory Macroeconomics	Unit 6 The External Sector	<ul style="list-style-type: none"> arguments for free trade; arguments for protection • Balance of Payments-accounting and equilibrium; disequilibrium in balance of payments and 	6	Students will learn the causes of trade & its related theories. In addition, an idea regarding Devaluation,	Questions Were discussed based on Exercises.

III	GE III Issues in Economic Development and India	Unit3 Development of the Dual Economy and Development Strategies	devaluation-the role of the Marshall-Lerner condition	6	the role of the Marshall-Lerner condition can be achieved.	Objective questions were provided to solve.
			<ul style="list-style-type: none"> • Balanced and unbalanced growth as development strategies • Surplus labour and disguised unemployment 	9	The concept of Balanced and unbalanced growth will be developed.	
			<ul style="list-style-type: none"> • Growth, productivity • Small scale industries • foreign investment 	9		
IV	GE IV Indian Economic Policies	Unit 2 Policies and Performance in Agriculture	.	6	Knowledge will be developed about Indian agriculture.	Short answer type questions were discussed
				6		
				6		

Lesson Plan - Prof. Jhumur Sengupta

CBCS

Semester	Paper	Unit	Sub-topics	No. of Lectures	Outcomes	Class Exercises
I	CC II Mathematical Methods in Economics I	Unit 2 Functions of one real variable	•Continuous functions of different types and their graphs	5	•Students would learn the graphical analysis, functions, and derivatives used in Economics, such as elasticity calculations, optimization exercises, etc.	Numerical problems will be given to the students to work out the solutions in class.
			•Concept of derivatives and Limits	6		
			•Derivatives of first and second order	5		
			•concave and linear function.	5		
			•concept of marginal elasticity, and average function	6		
		Unit 4 Integration of functions	•Methods of Substitution and integration by parts. •Application in economics	5	•Students will learn the applications of integrations in Economics, such as consumer's surplus, and producer's surplus.	Numerical problems on integration will be provided to the students for practice.
		Unit 6 Game Theory	•Zero-sum games- max-min and min-max	5	•At the end of the course, students will	Students will be provided with Game

			solutions •Dominant Strategy Equilibrium •Nash equilibrium •Nash equilibrium examples		learn game theory applications in various fields of Economics.	Theory examples for their understanding of the topic.
II	CC IV Mathematical Methods in Economics II	Unit 2 Multivariate Optimization	•Optimization of nonlinear functions: Convex, concave, and quasi-concave functions •Unconstrained and constrained optimization. •Inequality constraints and Kuhn-Tucker Conditions. •Value function and Envelope theorem •Linear programming	8 8 4 2 3	•Students will learn the techniques of solving optimization problems and will be able to apply their knowledge in profit maximization and cost minimization exercises by firms.	•Examples of classical optimization will be provided to the students as classwork. •Numerical problems based on linear programming and non-linear programming will be given as exercises in the class.
		Unit 4 Differential Equations	•Differential equations and economic applications •Non-linear differential equation system	6 5	•Students will learn how to solve linear and non-linear differential equations that will help them to find time paths of economic phenomena.	Several examples of linear and non-linear differential equations will be given and students will have to find out the stability conditions using the knowledge of problem-solving techniques.

III	CC VII Statistical Methods for Economics	Unit 1 Introduction and Review	<ul style="list-style-type: none"> •Representation of data-graphical and tabular methods •Frequency distribution 	6	Students will learn to various statistical data representation techniques and to make frequency tables in various forms.	Short answer type questions will be asked in class
		Unit 2 Measures of Dispersion	<ul style="list-style-type: none"> •Measures of central tendency •Dispersion (absolute and relative measures) •Lorenz curve and Gini coefficient) •Moments, Skewness, and Kurtosis •Correlation and Regression. 	15	•The students will understand the theory of statistics related to dispersion, sampling, and statistical inference.	Students will be given numerical problems in the class to examine how much they have learned in class.
		Unit 5 Sampling	<ul style="list-style-type: none"> •Sampling under SRSWR, SRSWOR •Stratified sampling,multi-staged sampling •Sampling distribution. 	10	•Students will learn sampling methods and the appropriateness of different types in different contexts.	Students will be asked to do a field survey using any method of sampling with a questionnaire.

		Unit 6 Statistical Inference	<ul style="list-style-type: none"> •Point estimation and interval estimation. •Basic principles of Ordinary Least Square, Maximum Likelihood Method, and Method of Moments •Interval estimation •Testing of hypothesis (Type I and Type II errors, power of a test, p-value) 	6	<ul style="list-style-type: none"> •Students will understand the theory of estimation, the importance of doing hypothesis testing, and related techniques. 	Numerical problems will be given in class based on the techniques of estimation and hypothesis testing. (A class test of one hour duration will be conducted after completion of the unit.)
III	SEC A(1) Data Analysis	Unit 2 Indian Official Statistics	<ul style="list-style-type: none"> •Central Statistical Office-National Accounts Statistics •National Sample Survey -68th Round •Census of India 2011 •Handbook of Statistics on Indian Economy. 	2 4 3 1	<ul style="list-style-type: none"> •Students will get to know various data sources which are useful for data analysis on the Indian economy. 	Students will be provided with different types of data from Indian Official statistics and will be asked to indicate the appropriate type of data analysis.
IV	CC IX Intermediate Macro Economics II	Unit 1 Basic Tenets of New Classical and New Keynesian Theories	<ul style="list-style-type: none"> •New Classical Theory-rational expectations and the theory of real business cycle. •New Keynesian Theory-nominal rigidities and real rigidities, rigidities in interest rates and credit 	8 8	<ul style="list-style-type: none"> •The students will understand the theory of real business cycle and the basic foundation of NKM 	Quiz will be conducted to examine the knowledge of the students on the topics.

			rationing.			
		Unit 2 Introductory Ideas on Consumption	<ul style="list-style-type: none"> •Consumption functions: Keynesian consumption function; Fisher's theory of 1 intertemporal choice; life-cycle and permanent income hypotheses; Dusenberry's relative income hypothesis; rational expectations and random-walk of consumption expenditure. 	12	Students will learn theories of consumption useful to understand household behavior.	Quiz will be conducted to examine the knowledge of the students on the topics. (A class test of one hour duration will be conducted after completion of the unit.)
IV	CC X Introductory Econometrics	Unit 5 Data Problems	<ul style="list-style-type: none"> •Data Problems- Heteroscedasticity, multicollinearity, and autocorrelation. 	20	•Students would learn about the nature of data problems, how to detect the problems and probable solutions.	Students will be given illustrative examples in class and will be asked to identify the problems.
IV	SEC B(2) Research Methodology	Unit 2 Methodological Issues	<ul style="list-style-type: none"> •Theoretical and Empirical Research in Economics. •Common sections of an ideal research 	2 4	•Students will understand the difference between empirical and theoretical research	•A research paper will be given to the students and they will be asked to

			<p>paper.</p> <ul style="list-style-type: none"> •Illustrations of empirical research work. •Illustrations of theoretical research. 	2	•They will be able to write research papers after gaining knowledge on research methodology.	interpret the results section.
				2		•They will be asked to write a research paper based on a topic of their own choice.
V	CC XI International Economics	Unit 4 Applications of Neo-classical Trade Models for Developing Countries	<ul style="list-style-type: none"> •Jones (1965) Heckscher-Ohlin type 2x2 full employment model for small open developing economies. •Jones(1971) 3x2(three factors-two commodities) specific-factor model. 	5	The students will learn Jones model of trade theory and its implications.	<ul style="list-style-type: none"> •questions will be discussed in the class. <p>(A class test of one hour duration will be conducted after completion of the unit.)</p>
		Unit VI: Open-Economy Macroeconomics and Balance of Payments	<ul style="list-style-type: none"> • Determination of equilibrium income in an open economy -Foreign Trade Multiplier 	6	•Students will understand how the economy works in the presence of the external sector.	Questions will be discussed in class.

			<ul style="list-style-type: none"> • Balance of Payment accounts in an open economy. • Fixed & Flexible Exchange Rates: adjustment of demand and supply of Foreign Exchange, Effect of devaluation, • The Mundel-Fleming Model (IS-LM BP model) 	2 2 4	<ul style="list-style-type: none"> • They will also learn the effects of devaluation on trade. 	
V	CC XII Indian Economy	Unit 2 Growth & Distribution	<ul style="list-style-type: none"> • Trends in GDP and per capita GDP • Growth, poverty and inequality • Youth unemployment • Policy perspectives in growth and distribution 	6 5 7	Students would obtain an idea about the trajectory of growth and will be able to assess whether the GDP growth mitigates the poverty and unemployment problems in India.	PPT Presentations by the students on the related topics will be arranged.
V	DSE A(1).1 Applied Econometrics	Unit 1 Steps in Empirical Research	<ul style="list-style-type: none"> • Use of econometric models in research • The basic commands in STATA and R 	2 4	Students will learn to perform data analysis in STATA and R which will help them both in doing research and getting jobs.	Students will be given class exercises on STATA and R software packages.
		Unit 3 Applications of Regression Analysis	<ul style="list-style-type: none"> • Cross-section analysis • Time series analysis • Panel data analysis • hands-on training with STATA 	5 4 2 15		

V	DSE B(1) Financial Economics	Unit 2 Investment Theory and Portfolio Analysis	•Portfolio analysis- portfolio mean and variance	10	Students will understand concepts of portfolio and will be able to relate the theoretical knowledge with actual portfolio tradings in stock exchanges.	•Quiz will be conducted in class to test the knowledge of the students. •Sums will be given in class to test their knowledge.
			•Markowitz model and the two-fund theorem; and the one-fund theorem.	10		
			•CAPM: The capital market line; the capital asset pricing model	10		
VI	CC XIII Public Economics	Unit 2 Choice of Public Economics	• Characteristics of Pure Public Good and Private Good	4	•The students will understand the role of government in economic development •They will be able to assess the roles and behavior of government in a democratic setup.	Quiz will be conducted to examine the knowledge of the students on the topics.
			•Market Failure in case of Pure Public Good	5		
			•Lindahl Equilibrium	4		
			•Voting Equilibrium	3		

	CC XIV Development Economics	Unit 2 Poverty and Inequality	<ul style="list-style-type: none"> •Inequality axioms •Gender inequality and development •Measurements of poverty • The vicious circle of poverty 	3 2 5 2	<ul style="list-style-type: none"> •Studying poverty and inequality allows individuals to understand the measurements and meaning of poverty and inequality •Studying these topics promotes interdisciplinary understanding and encourages holistic approaches to complex social problems.. 	<p>Quiz will be conducted to examine the knowledge of the students on the topics.</p> <p>(A class test of one hour duration will be conducted after completion of the unit.)</p>
		Unit 4 Population , Growth and Economic Development	<ul style="list-style-type: none"> •Birth rates, death rates, mortality rates and fertility rates •Demographic transition theory •Costs of children, externalities •Low level equilibrium trap and critical minimum effort 	2 4 3 3	Students gain a deep understanding of population trends, including fertility rates, mortality rates, migration patterns, and demographic transitions.	Short questions will be discussed in class

VI	DSE A(2).1 Money and Financial Market	Unit 2 Financial Institutions, Markets, Instruments and Financial Innovations	•Role of financial markets and institutions	4	•Students will obtain an overall idea of money and capital markets, and their role in financial intermediation. •They will understand the behavioral problems that exist among the lenders and borrowers in any real-life financial transaction.	Quiz will be conducted in class to test the knowledge gained by the students on the topics.
			•Problem of asymmetric information – adverse selection and moral hazard	2		
			•Money and capital markets	2		
			•financial derivatives • Leveraging mechanism of banks.	2 5		
	DSE B(2).1 Environmental Economics	Unit 3 The Design and Implementation of Environmental Policy	•Pigouvian fees	6	• Knowledge will be acquired on Pigouvian fees, command, and control approaches for combating pollution.	Short questions will be discussed in class
			•Regulating pollution: command and control approach	6		
			•Theory of tradable pollution permits	4		
VI	DSEB(2).2 Issues in Development Economics	Unit 3 Individuals, Communities, and Collective Outcomes	•Individual behavior in social environments	4	• Students will acquire knowledge of collective outcomes through multiple social equilibria.	Short questions will be discussed in class
			•Multiple social equilibria	4		
			•Governance in organizations and communities	5		
			•Individual response to organizational inefficiency	2		

		Unit 5 Globalization	<ul style="list-style-type: none"> •Globalization from a historical perspective •The economics and politics of multilateral agreements •Trade, production patterns, and world inequality •Financial instability in a globalized world. •India in the context of the global economy 	3 4 3 3 2	<ul style="list-style-type: none"> •Students will understand the concepts of globalization. •They will be able to relate the interdependence of the countries in the era of globalization and will understand the position of India in a globalized world. 	Students will have to present topics related to globalization.
I	GE I Introductory Microeconomics	Unit 1 Exploring the subject matter of Economics	<ul style="list-style-type: none"> •Scope and methods of economics •Problems of scarcity and choice •Price system, property rights and profit 	1 3 4	<ul style="list-style-type: none"> •Study of economics focuses on individual economic agents, such as households, firms, and markets. •It explores the problems of scarcity of resources in production, pricing, and resource allocation. •It includes supply and demand, market structures, price determination, and profits of the firms. 	Short answer type questions will be discussed in class.

		Unit 4 The Firm and Market Structure	<ul style="list-style-type: none"> •Production function of a firm; behavior of profit-maximizing firms and the production process; the cost function, •Features of a perfectly competitive market. •Short run & long-run equilibrium under perfect competition. 	5 4 2	•The students will understand the two main pillars of microeconomic theory-production and cost structure of firms under a perfectly competitive market.	Short answer type questions will be discussed in class.
		Unit 5 Imperfect Market Structure	<ul style="list-style-type: none"> •Monopoly-basic structure •Price discrimination in monopoly 	4 2	The basic structure of the monopoly market and its features will be understood	Short answer type questions will be discussed in class.
II	GE II Introductory Macro Economics	Unit 1 Introduction to Macroeconomics and National Income Accounting	<ul style="list-style-type: none"> •Basic issues of macroeconomics-measurement of gross domestic product at market price and factor cost •Measurement of national income-income method and the expenditure method •The value-added method of measuring national income 	10 8 7	•Students will understand the methods of national income measurements and their identities.	Short answer type questions will be discussed in class. (A class test of one hour duration will be conducted after completion of the allocated syllabus.)

III	GE III Issues in Economic Development and India	Unit 2 Poverty, Inequality, and Development	•Basic issues of poverty and inequality.	6	•Students will understand the concepts of poverty and inequality.	Short answer type questions will be discussed in class. (A class test of one hour duration will be conducted after completion of the allocated syllabus.)
			•Basic ideas about the measurement of poverty and inequality.	6		
			•Trends and policies to eradicate poverty and income inequality in India	6		
IV	GE IV Indian Economic Policies	Unit 1 Macroeconomic Policies and Their Impact	•Fiscal Policy; trade and investment policy; financial and monetary policies; labour regulation	18	•Students will gather knowledge on different economic policies that govern India.	A quiz will be conducted to test the knowledge of the students.