# SYLLABUS AND MODEL QUESTION PAPERS
## DEPARTMENT OF ECONOMICS

BANGALORE UNIVERSITY  
Department of Economics  
Scheme for BA/B.Sc Semester Degree course in Economics

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Paper</th>
<th>Title of The Paper</th>
<th>Internal Marks</th>
<th>Theory Marks</th>
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<tbody>
<tr>
<td>I Year</td>
<td>I SEM</td>
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<td>Quantitative techniques</td>
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### QUESTION PAPER PATTERN

Maximum Marks for Theory: 90  
Internal Marks: 10

**PART-A (Conceptual) - (2x10=20 Marks)**  
The student shall answer 9 out of 12 questions. The answers to each question shall not exceed 5 to 6 sentences. Due weightage to be given to all modules.

**PART-B (Analytical)-(5x5=25 Marks)**  
The Student shall answer 5 out of 7 questions. This part shall test the analytical ability of the student. The answers to each question shall be about 15 to 20 sentences. This part should have a minimum of one question from each module.

**PART-C(Descriptive)-(15x3=45 Marks)**  
The student shall answer 3 out 5 questions. This part shall test the in-depth understanding of the subject by the student. Each answer shall not exceed four pages of normal handwriting. This part should have one question from each module.

**Instructions:**  
1) To Teachers:  
The scope of the topic is to be arranged in accordance with the number of hours specified against each topic.

2) To the Board of Examiners:
The Selection of questions for each part is to be based on the number of hours allotted to each topic.

I-SEMESTER
MICRO ECONOMICS-PAPER-1.1
MODEL QUESTION PAPER

Time: 3 hours Max. Marks: 90

Part-A (Conceptual)
1. Answer any nine of the following questions in 5-6 sentences each:  2x10=20
   a) Distinguish between positive and normative economics
   b) State any two uses of the study of microeconomics
   c) Give the meaning of production function
   d) Distinguish between cardinal and ordinal utility
   e) What is an indifference map?
   f) Give the meaning of the term equilibrium
   g) Distinguish between increase and extension of demand.
   h) What is opportunity cost?
   i) Differentiate between a firm and industry.
   j) Given the meaning of selling costs
   k) Define Quasi rent.
   l) Mention any two features of Oligopoly.

Part-B (Analytical)
Answer any four questions: 5x5=25
2. Graphically explain the economy’s production possibility curve in terms of economic growth.
3. Explain various types of price elasticity of demand with the help of diagrams.
4. Describe the two conditions necessary for attaining equilibrium for a firm in the short-run.
5. Discuss the conditions of price discrimination under monopoly.
6. Explain the innovation theory of profit.
7. What are the diseconomies of scale? Explain with illustrations

Part-C (Descriptive)
Answer any four questions: 15x3=45
8. Compare and contrast the marginal utility approach with the indifference curve approach in understanding consumer behaviour.
9. State and explain with suitable diagrams the law of demand. What are the reasons for the downward slope of the demand?
10. How does the producer attain equilibrium under the iso-quant approach?
11. Discuss the role of time element in the determination of price and output under perfect competition with the help of suitable diagrams.
12. Explain the liquidity preference theory of interest. What is liquidity trap?

COURSE OBJECTIVES:
► To help students acquire knowledge of some of the important principle and theories of microeconomics.
► To provide the foundation for the study of other branches of economics.
► To develop analytical, reasoning and graphical presentation skills.
► To enable the student to appreciate the utility of economics in day-to-day life.

METHODOLOGY:
Emphasis to be given to teaching concepts.
Theories and laws to be taught with the help of tables and diagrams
Questions to be designed to evaluate a student’s ability to use diagrams, explain concepts
and evaluate at theoretical levels.

MODULE-I MICROECONOMICS AND THEORY OF CONSUMPTION

- Scope of microeconomics, limitation and uses. Positive and Normative economics.
- Problem of choice-wants and resources. Basic economic problems common to all
  economies. Role of price mechanism in a mixed economy. [4 Hrs]
  Consumers Surplus (Marshalian). [3 Hrs]
- Ordinal utility analysis indifference curves-properties, map, price line, consumer
  equilibrium, price effect, income effect and substitution effect. [5 Hrs]

[Total: 12 Hours]

MODULE-II DEMAND AND SUPPLY

- Law of demand, Reasons for the downward slope of demand curve, exception to the law,
  changes in demand. [4 Hrs]
- Elasticity-kinds, types price elasticity with diagram, factors determining price elasticity,
  methods of measurement-per centage method. Arc-method, total outlay-method [6 Hrs]
- Law of Supply, Changes in supply. [2 Hrs]

[Total: 12 Hours]

MODULE-III THEORY OF PRODUCTION

- Production function, Law of variable proportions-short-run and long-run Laws of returns,
  economies of scale, iso-quants, isocosts, production equilibrium [6 Hrs]
- Cost-opporatunity cost, Real cost, Types-short-run, long-run-Average, Marginal, Fixed,
  Variable (with diagrams), Long run cost curve [4 Hrs]
- Revenue-Average, Marginal, Total [2 Hrs]

[Total: 12 Hours]

MODULE-IV PRODUCT PRICING

- Concepts of firms, industry, equilibrium [1 Hr.]
- Perfect competition, price and output determination and role of time element in the theory
  of price determination. [3 Hrs]
- Monopoly, price output determination, price discrimination. [3 Hrs]
- Monopolistic competition, Price and output determination, Selling costs, Product
  differentiation, Wastes in monopolistic competition. [3 Hrs]
- Oligopoly features, Duopoly, Monophony [2 Hrs]

[Total: 12 Hours]

MODULE-V FACTOR PRICING

- Nature of factor markets, Marginal productivity theory of distribution. [2 Hrs]
- Rent-Demand and supply theory, Quasi rent, Transfer earning. [2 Hrs]
- Wages-Reasons for wage differentials, collective bargaining, [2 Hrs.]
- Interest-Classical, Neo-classical Keynesian [2 Hrs]
- Profit-Dynamic, Innovation, Risk and Uncertainty theory [2 Hrs]

[Total: 12 Hours]

READING LIST:
   Homewood.

MODEL QUESTION PAPER
II-SEMESTER
MACRO ECONOMICS PAPER-2.1

Time: 3 hours  Max Marks: 90

Part-A (Conceptual)

1. Answer any ten of the following questions in 5-6 sentences each:  2x10=20
   a) Define macro economics
   b) Distinguish between GDP and GNP
   c) Name any two Classical economists.
   d) Expand M.P.C and M.E.C
   e) State Fisher’s equation of exchange.
   f) Give the meaning of margin requirement.
   g) Distinguish between impact and incidence.
   h) What is meant by deficit budget?
   i) Give the meaning of fiscal administration.
   j) Distinguish between inflation and deflation.
   k) What is stagflation?

Part-B (Analytical)

2. Examine the circular flow of income and wealth in an economy.  5x5=25
3. Distinguish between the working of the multiplier and accelerator.
4. Explain the portfolio management of a bank.
5. Examine the different methods of debt redemption.
6. What are the different phases of trade cycle?
7. Explain Demand pull and cost push inflation.

Part-C (Descriptive)

8. Discuss the different concepts of national income, How is national income estimated.  15x3=45
10. Distinguish between quantitative and qualitative methods of credit control. Discuss quantitative methods elaborately.
11. Critically examine the principle of maximum social advantage.
12. Distinguish between cost-push and demand-pull inflation. Discuss the different effects of inflation.

COURSE OBJECTIVES:
► To enable the student to learn the well formulated principles of macro economics
► To help the student to understand the integrated working of modern economy.
► To provide the basis for the study of other branches of economics.
► To help the student to appreciate the role of government in the economic functioning of a nation.

MODULE-I MACRO ECONOMICS AND NATIONAL INCOME
- Macro economies, micro-macro paradox, importance and uses of macroeconomics. [3Hrs].
- Circular flow of income and wealth [2Hrs]
- National income-concepts, methods of calculating national income, problems in the estimation of national income [5 Hrs.]

[Total: 14 Hours]

MODULE-II CLASSICAL AND KEYNESIAN ECONOMICS
- Classical theory of income-output and employment Say’s law of market. Wage price flexibility, critical evaluation [3Hrs]

[Total: 14 Hours]

MODULE-II MONETARY ECONOMICS
- Value of money-cash transaction, cash balance approach-Marshall, Keynes index numbers-simple weighted. [5 Hrs.]
- Commercial banking-portfolio management, credit creation. [3 Hrs]
- Central banking, methods of credit control-quantitative, qualitative. [5 Hrs.]

[Total: 13 Hours]

MODULE-IV PUBLIC FINANCE
- Effects of taxation on production, consumption and distribution. [8 Hrs]
- Public expenditure-causes of growth of public expenditure, Effects of public expenditure on production, consumption and distribution. [2 Hrs’]
- Public debt-Sources of public borrowing Methods of debt redemption [2 Hrs]
- Budget-types. [1 Hrs].
• Inflationary gap
• Methods to control inflation-fiscal, monetary and administrative measures
• Trade cycles-phases.

[Total: 10 Hours]

READING LIST:

III-SEMESTER
QUANTITIATIVE METHODS-PAPER- 3.1

COURSE OBJECTIVES:
► To help students to acquire some Basic skills in both mathematics and statistics.
► To develop analytical, reasoning and graphical presentation skills.

METHODOLOGY:
► Emphasis to be given on teaching basic concepts and definitions.
► Theories and laws to the taught with the-help of simple mathematics and diagrams
► Question to the designed to evaluate a student’s ability to use diagrams, explain concepts and evaluate at theoretical levels.

MODULE-I
• Functions Linear, Quadratic exponential and logarithmic functions and their simple uses in economics. Market equilibrium-effects of taxes on equilibrium price and quantity. Simple linear Macro models.
• Interest compounding and exponential functions.

MODULE-II
Calculus: Simple derivative rules-Partial derivatives. Simple rules of integration.弹性定理-价格-收入和成本弹性。需求的偏弹性。互补品和互补品。

二元函数最大值和最小值的计算：微观经济学的简单应用。

定义为统计：原始数据和统计数据。收集原数据的方法。数据的表列和展示-图形表示数据。

统计量的中心趋势：平均数，中位数和众数-地心和调和平均数。

统计量的分散度：范围，平均偏差，四分位差和标准差。

相关分析：卡尔皮尔森相关系数。斯皮尔曼等级相关。

回归分析：Y对X和X对Y的回归计算。

时间序列分析：时间序列的组成部分-分解趋势，季节性和周周期的成分。

指数数字：固定和链基于简单相关的。复合指数数字的计算。

指数数字的 aggregates: Laspeyer's Peachey's and Fisher’s index numbers. Time and factor reversal tests.

基础阅读列表

MODEL QUESTION PAPER
III-SEMESTER
QUANTITATIVE METHODS-PAPER 3.1

Time: 3 hours Max. Marks: 90

Part-A (Conceptual) 2x10=20

1. Answer any ten of the following question in 5-6 sentences each:
   a) Write formula for calculation of the present value for a given future stream of income.
   b) What is meant by non-singular matrix? Give an example.
   c) If y=x² find dy/dx using first principle.
d) If \( y=x^2 \) find \( \frac{Ey}{Ex} \), the elasticity of \( y \) with respect to \( x \).
e) Define consumer’s surplus using mathematics.
f) Express the price elasticity in terms of MR and AR
g) What does the measure dispersion measure?
h) Write down the normal equations for the X on Y regression Line.
i) Distinguish between fixed and chain based index numbers.
j) When does both the regression lines coincide?
k) What does the trend reflects in the time series analysis?
l) Give the scatter diagram for \( r=-1 \)

Part-B (Analytical)

Answer any five questions: \( 5 \times 5 = 20 \)

2. If \( D=100-3p \) and \( S=50+2p \) calculate the equilibrium price and the quantity. When a specific tax of Rs. 3 per unit is levied calculate the new equilibrium price and the quantity.

3. Define the elasticity of the Total cost. Prove that the elasticity of the average cost is equal to the elasticity of the total cost minus one.

4. The long run cost functions of a firm is \( C=q^3 – 4q^2+8q \). Prove that \( MC=AC \) at the minimum point of MC.

5. For the data given below Obtain Mean, Median and Mode.

<table>
<thead>
<tr>
<th>X</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
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<tbody>
<tr>
<td>f</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

6. For the Time series data given below obtain the trend by using OLS method.

<table>
<thead>
<tr>
<th>Year</th>
<th>1950</th>
<th>1951</th>
<th>1952</th>
<th>1953</th>
<th>1954</th>
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<tbody>
<tr>
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<td>50</td>
<td>60</td>
<td>58</td>
<td>65</td>
<td>70</td>
</tr>
</tbody>
</table>

7. The following are the marks scored by 10 students in Economics and statistics. Obtain Karl Pearson’s correlation coefficient.

<table>
<thead>
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<th>72</th>
<th>68</th>
<th>52</th>
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<td>34</td>
<td>56</td>
<td>75</td>
<td>80</td>
<td>65</td>
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</tbody>
</table>

Part-C (Descriptive)

Answer any four questions: \( 15 \times 3 = 45 \)

8. a) If \( u=f(x) \) and \( v=g(x) \) Prove that
\[
E(u.v) = Ex Eu + Ev Ex
\]
b) Given the demand law for related commodities \( q_1=100 \ p_1 \ p_2 \) obtain the price the partial cross elasticities and establish that the commodities are compliments.

9. a) Distinguish between consumer and producer surpluses.
b) If \( D=50p + 250 \) and \( S=25p+25 \) obtain both consumer and producer surpluses at the equilibrium.

10 a) Explain why standard deviation is considered superior than the mean deviation measures.
b) The following are the scores secured by two batsmen in a Worlds Cup cricket series.

<table>
<thead>
<tr>
<th>A</th>
<th>58</th>
<th>65</th>
<th>72</th>
<th>68</th>
<th>52</th>
<th>55</th>
<th>53</th>
<th>56</th>
<th>87</th>
<th>62</th>
</tr>
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<tbody>
<tr>
<td>B</td>
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<td>60</td>
<td>58</td>
<td>65</td>
<td>70</td>
<td>34</td>
<td>56</td>
<td>75</td>
<td>80</td>
<td>65</td>
</tr>
</tbody>
</table>

Obtain the best average scorer Also name the more consistent batsmen.

11. a) Distinguish Between correlation and Regression.
b) In a beauty context the following are the scores awarded by two judges A and B. Obtain the Sperman’s rank correlation coefficient.

<table>
<thead>
<tr>
<th>A</th>
<th>58</th>
<th>35</th>
<th>72</th>
<th>78</th>
<th>52</th>
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<td>B</td>
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<td>75</td>
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</table>

12. a) Distinguish between Time and Factor reversal tests.

b) For the data given below obtain both price and quantity indices by using Fisher’s formula.

<table>
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<td>9</td>
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<td>E</td>
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</tr>
</tbody>
</table>

IV- SEMESTER
INTERNATIONAL ECONOMICS-PAPER-4.1

COURSE OBJECTIVES:
- To enable the students to learn the fundamental theories of international economics.
- To enable the students to apply the knowledge gained from the study of micro and macroeconomics in the field of international economics.
- To enable the students to understand the international trade system as it exists today.

MODULE-I THEORIES OF INTERNATIONAL TRADE
- Meaning and importance of international trade [1 Hr].
- Distinction between interregional and international trade [1 Hr.]
- Classical theories of international trade - Adam Smith and David Ricardo. [3 Hrs]
- General equilibrium analysis - production possibility curve-community indifference curve [3 Hrs]
- Heackcher-Ohlin theory - equilibrium under increasing cost. [3 Hrs]
- Factor price equalization theorem - Offer curves-meaning, reciprocal demand [1 Hr]

[Total: 14 Hours]

MODULE-II TRADE AND COMMERCIAL POLICY
- Terms of trade - meaning and concepts-factors-gross, net income terms of trade. [4 Hrs]
- Trade and development - Prebisch-Singer thesis [2 Hrs]
- Free trade Vs protection (arguments for and against) [2 Hrs]
- Tariffs-meaning, types, effects [4 hrs]
- Quotas-meaning and types [1 Hrs]

[Total: 14 Hours]

MODULE-III FOREIGN EXCHANGE
- Foreign exchange-meaning & determination of foreign exchange rate [1 Hr]
- Demand and Supply theory of foreign trade (Balance payment theory) [2 Hrs]
- Purchasing power parity theory [2 Hrs]
- Fixed and Flexible exchange rate-merits and demerits [3 Hrs]
- Balance of trade and Balance of payment-causes for disequilibrium of balance of payment-methods to correct disequilibrium [4 Hrs]

[Total: 13 Hours]
MODULE-IV INTERNATIONAL MONETARY INSTITUTIONS
- International Monetary Fund [IMF]-Objectives-functions, international liquidity [3 hrs]
- World Bank [2 Hrs]
- Asian Development Bank [ADB] [1 hrs]
- International Development Association. [IDA] [1hrs]
- International Financel Corporation. [IFC] [1 hrs]

MODELE-V ECONOMICS OF INTEGRATION
- Meaning of economic integration [1 hrs]
- Theory of customs union-partial equilibrium analysis-European Union-objectives and working-Euro currency [2 Hrs]
- South Asian Association for Regional Co-operation [SAARC] [1 hrs]
- Foreign Capital –Role and sources of foreign capital
  - Foreign Direct Investment [F.D.I]
  - Foreign Institutional Investment [F.I.I]
  - Multinational Corporation [M.N.C] [3 Hrs]
- General Agreement on Trade and Tariff [GATT]-origin-Uruguay round (Dunkel draft) [2 hrs].
- World Trade Organization [W.T.O]-Factors leading to Globalization. [2 Hrs].

READING LIST:
2. Keanen P.B. The International Economy
4. Ellsworth P-International Economics
5. Mannur H.G.- International Economics
6. M.L. Jhingan-International Economics

MODEL QUESTION PAPER
IV-SEMSESTER
INTERNATIONAL ECONOMICS-PAPER-4.1

Time: 3 hours 2x10=20

PART-A (Conceptual)

1. Answer any 10 of the following question in 5 to 6 sentences each
   a) Distinguish between internal and international trade
   b) What is absolute cost advantage?
   c) What is community indifference curve?
   d) Distinguish between net-barter terms of trade and gross-barter terms of trade
   e) Distinguish between tariff and quotas
   f) Distinguish between fixed and flexible exchange rate.
   g) What is economic integration?
   h) How is F.D.I different from F.I.I?
   i) What is MFN clause?
   j) What is Euro?
   k) What is Globalisation?
   l) What are SDR’s?

Part-B (Analytical)
Answer any four of the following in about 15 to 20 sentences each

2. Explain the Ricardian theory of international trade?
3. Explain the infant industry argument
4. Explain the advantages of fixed exchange rate
5. What are the objectives of World Bank?
6. What are the various sources of foreign capital?
7. Explain the problem of subsidies in WTO regulations.

Part-C (Descriptive)

Answer any four questions:

8. Critically examine the Heckscher theory of international trade.
9. Examine the effect of tariff in terms of partial equilibrium analysis.
10. What are the causes for disequilibrium in the balance of payment? Suggest measures to correct disequilibrium
11. Examine the role of IMF in Promoting international liquidity.
12. Explain the objectives and functions of W.T.O.

V-SEMESTER
INDIAN ECONOMY-PAPER-5.1 (PART-A)
(Compulsory Paper)

COURSE OBJECTIVES
- To enable a student to have an overview of the working of the Indian economy.
- To enable a student to understand the changing trends of in the Indian economy.
- To enable a student to understand the leading issues in India’s economic development

MODULE I STRUCTURE OF INDIAN ECONOMY
- India-developing economy, features, economic and non-economic [3 Hrs]
- National income-trends, composition. [5 Hrs]
- Regional inequalities-measures to reduce regional inequalities, wage, employment, poverty, poverty line, extent, poverty alleviation programmes. [4 Hrs]

TOTAL: 12 Hours

MODULE II DEMOGRAPHIC PROFILE
- Trends in population growth-growth rate, density, age, sex, size, composition, and population policy-2000 [5 Hrs]
- Changes in occupational structure, unemployment-types, extent, measures to reduce unemployment [5 Hrs]
- Rural, Urban migration-extent [2 Hrs]

TOTAL: 12 hours

MODULE III AGRICULTURE
- Trends in agricultural production, causes of low production. [2 Hrs]
- Agricultural finance-co-operative credit, problems and prospects-NABARO [3 Hrs]
- Agricultural marketing-defects, agricultural prices-procurement price, public distribution system {P.D.S} [4 Hrs]
- Irrigation-defects, modern irrigation systems-watershed development, dry land farming [3 Hrs]

TOTAL: 12 Hours

MODULE IV INDUSTRY
- Industrial policy resolution – 1991 [3 Hrs]
- Problems of public sector enterprises-disinvestment [3 Hrs]
- Engineering industry-information technology (I.T) industry [3 Hrs]
- Small scale industries-problems, prospects and challenges. [3 Hrs.]

[Total: 12 Hours]

**MODULE V INFRASTRUCTURE (PHYSICAL AND SOCIAL)**

- Sources of power in India – conventional [2 Hrs]
- Non-conventional energy, energy crisis, power sector reforms [4 Hrs]
- Universal promotion of primary education, role of government and N.G.O’s [3 Hrs]
- Health sector-immunization, maternal and child health strategies, prevention of communicable diseases [3 Hrs.]

[Total: 12 Hours]

**READING LIST**

1. Alak G-Indian Economy, Its nature and problems
2. Ruddar Dutt-Indian Economy
3. Dhingra I.C. – The Indian Economy
5. Uma Kapila-An overview of Indian Economics –volume I-IV
6. Govt. of Karnataka-Economic Survey (Latest year)
7. Govt. of Karnataka –Karnataka at Glance.
8. O.D. Heggade-Karnataka Economy, Kannada

**MODEL QUESTION PAPER**

**V-SEMESTER**

**INDIAN ECONOMY-PAPER-5.1 (PART-A)**

Time: 3 hours     Max. Marks:90

Part-A (Conceptual)

Answer any 10 of the following in about 5 to 6 sentences each. 2x10=20

a) Expand HDI
b) What is poverty line?
c) Mention any two indicators of regional balances
d) What is the sex ratio according to 2001 census?
e) What is the occupational distribution of population according to census 2001?
f) State any two objectives of TRYSEM
g) What is procurement price?
h) What is dry land farming?
i) What is disinvestment?
j) Expand SIDBI
k) Mention any four non-conventional sources of energy
l) What is pulse polio programme?

Part-B (analytical)

Answer any four of the following in 15 to 20 sentences each 5x5=25

2. Explain any two social factors responsible for slow economic development of India
3. What are the causes of urban migration?
4. State the objectives of N.A.B.A.R.D
5. Explain the problems of engineering industry
6. Write a note on the role of N.G.O’s in promoting primary education.
7. Explain any two reasons for the failure of PSU’s in India

Part-C (Descriptive)
Answer any four of the following in not more than FOUR pages each
15x3=45
8. Explain the trends and composition of national income
9. Critically examine the recent population policy
10. Describe the causes of low agricultural productivity
11. Explain the role and problems of small scale industries in the context of globalization.
12. Explain the measure adopted by the government to solve the energy crisis.

V-SEMESTER
DEVELOPMENT ECONOMICS-I; PAPER-5.2 (A) (PART-A)
(Optional paper)

COURSE OBJECTIVES:
➢ To enable a student to learn the fundamental concepts of Development economics
➢ To enable a student to develop a logical and analytical view of issues in today’s world.
➢ To enable a student to relate learning to reality in case of development issues like poverty, technology, human resource development etc.

MODULE-I FUNDAMENTAL CONCEPTS
• Meaning of economic development-distinction between economic growth and economic development [2 Hrs]
• Measurement of economic development-GNP, PCI, PQLI, HDI, human capabilities, Sustainable development [3 Hrs.]
• Gender empowerment-index of development (GED) Factors determining economic development-economic and non-economic factors [3Hrs]
• Obstacles of development-vicious circles of poverty market imperfections social faces [4 Hrs]

[Total: 15 Hours]

MODULE-II NATURAL RESOURCES AND DEVELOPMENT
• Role of natural resources and its use in economic development [3 Hrs]
• Reasons of environmental degradation-air, water, and forests [2 Hrs]
• Meaning of environmental economics [1 Hrs]
• Market failures to control degradation, choice of instruments-govt. intervention that is polluter pay principle. Awareness and community participation [6 Hrs]

[Total: 12 Hours]

MODULE-III HUMAN RESOURCE AND DEVELOPMENT
• Importance of HRD in economic development [1 Hrs]
• Components of human capital formation. [2Hrs]
• Manpower planning-meaning, manpower shortages, manpower surpluses, strategy for manpower planning. [5 Hrs]
• Entrepreneurship and development, types and role. [2 Hrs]

[Total: 10 Hours]

MODULE-IV CAPITAL RESOURCES AND DEVELOPMENT
• Importance of capital formation-causes for low capital formation [2 Hrs]
Sources of finance for economic development-domestic resources, savings, taxation, deficit financing, public borrowings [4 Hrs]

External sources-foreign capital-role of foreign capital-foreign aid-tied and untied aid. Private direct investment-constraints. [3 Hrs]

MODULE-V TECHNOLOGY AND DEVELOPMENT

Role of technology in economic development-channels of technology transfer-problems [2 Hrs]

Appropriate technology for developing countries [1 Hrs]

Choice of techniques labour intensive technology, capital intensive technology [4 Hrs]

Capital output ratio (COR), Incremental capital output ration (ICOR), determinants and importance, investment criteria in economic development. [4 Hrs.]

Capital turnover SMP, BOP criteria. [3 Hrs]

READING LIST:

1) Ray Debraj- Development Economics
2) Hent Diana – Economic theirs of Development-An analysis of competing paradigm
3) Gerald M Meier-Leading issues in Economic Development
4) Meier and Baldwin-Economic Development
5) Higgins B-Economic Development Past and Prsent
6) Todaro-Micheal – Economic Development
7) Lekhi Development Economics
8) M.L. Jhingan-Economics of Development and planning
9) Mishra and Puri-Economics of Development and planning
12) World Bank Reports-Various issues
13) Human Development-Various issues
14) Asian Development-Various issues

MODEL QUESTION PAPER

V-SEMESTER

DEVELOPMENT ECONOMICS-I: PAPER-5.2 (A) (PART-A)

Time: 3 hours

Max. Marks:90

PART-A (Conceptual)

1. Answer any ten of the following question in 5 or 6 sentence each: 2x10=20
   a) Define economic development.
   b) Mention the importance of HDI.
   c) Distinguish between exhaustible and non-exhaustible resources
   d) Give any two reasons for air pollution
   e) Suggest two measures for protecting wild life and forests
   f) State governmental measures to protect bio-diversity.
   g) What are the different concepts of human capital formation?
   h) Distinguish between tied-aid and untied-aid.
   i) State any two advantages of labour intensive technology.
   j) Mention the different sources of capital formation.
   k) Define investment criteria
1) Expand P.Q.L.I

PART-B (analytical)
Answer any four of the following questions in 15-20 sentences each. 5x5=25
2. Explain the economic factors in economic development.
3. Discuss the need to create awareness to protect environment
4. Bring out two limitations of deficit finance as a source of development finance.
5. Explain SMP criterion.
6. Briefly explain the role of entrepreneur in economic development.
7. Explain the concept of gender employment, What is its importance in economic development?

PART-C (Descriptive)
Answer any four of the following questions in four to five pages each 15x3=45
8. Distinguish between economic growth and economic development. Evaluate the measurements of economic development.
9. Explain the role of government and NGO’s in preventing environmental decay.
10. Describe the components of manpower planning.
11. Discuss the importance of foreign aid as a source of development finance.
12. Discuss the role of technology in economic development. Mention the problems associated with the transfer of technology in under developed countries.

V-SEMESTER
ECONOMIC DOCTRINES-I: PAPER 5.2(B) (PART-A)
(Optional Paper)

COURSE OBJECTIVES:
➢ To enable a student to understand the rich contributions of eminent thinkers to economic thought.
➢ To enable a student to understand the evolution of economic ideas over time.
➢ To enable a student to understand the importance of the economic ideas as developed by various thinkers.

MODULE-I PRE-CLASSICAL ECONOMIC IDEAS
• Significance of the study of economic doctrines [2 Hrs]
• Ancient economic thought-Hebrew, Greek and Roman [2 Hrs]
• Mercantilism- Mercantilist ideas, representative mercantilist, decline of mercantilism [4 Hrs]
• Physic racy-factors giving rise to Physiocracy-ideas-representative. Physiciorats, decline of Physiocracy. [4 Hrs.]
[Total: 12 Hours]

MODULE –II CLASSICAL SCHOOL
• Tenets of Classicism [2 Hrs]
• Economic ideas of Adam Smith [2 Hrs]
• Thomas Robert Malthus [2 Hrs]
• David Ricardo [2 Hrs]
• J.B. Say [2 hrs]
[Total: 12 Hours]
MODULE –III SOCIALIST SCHOOL
- Pre-socialists-Sismondi [2 Hrs]
- Robert Owen [2 Hrs]
- Prodhan [2 Hrs]
- Kari Marx-materialistic interpretation, dialectical materialism, class struggle theory of surplus value, capitalist crisis, Marxism and Classicism, Marx and Gandhi [6 Hrs]
[Total: 12 Hours]

MODULE IV MARGINAL SCHOOL
- Significance of the Marginal School [1 Hrs]
- Ideas of the Marginal school [1 Hrs]
- Contributions of Gossen [1 Hrs]
- Kari Menger [2 Hrs]
- W.S. Jevons [2 Hrs]
- Leon Walras [2 Hrs]
- Austrian School [2 Hrs]
- Bohm Bawerk [2 Hrs]
[Total: 12 Hours]

MODULE V NEO-CLASSICAL SCHOOL
- Birth of the Neo-classical school [1 Hrs]
- Contributions of Alfred Marshall [3 Hrs]
- Chamberlain [3 Hrs]
- Mrs. Joan Robinson [3 Hrs]
- J.B. Clark [2 Hrs]
[Total: 12 Hours]

READING LIST:
1. Alexander Gray, The Development of Economic Doctrines
2. Arthur Mource, Early Economic Thought
3. Eduand Whittaker, Schools and Streams of Economic thought
4. Ganguly, Indian Economic Thought
5. Guide and Rist, A History of Economic Doctrines
6. Hajela T.N, History of Economic Thought
9. Mc Connel J.W., Ideas of Great Economists
10. Puttaswamaiah, Nobel Economists
11. Spiegel H.W, The Development of Economic Thought
12. William J Barber, A History of Economic Thought

MODEL QUESTION PAPER
V-SEMESTER
ECONOMIC DOCTRINES-I: PAPER-5.2 (B) (PART-A)

Time: 3 hours  Max. Marks:90

PART-A (Conceptual)
1. Answer any ten of the following question in 5 or 6 sentence each: 2x10=20
   a) What do you mean by reciprocal needs?
   b) What is tableau economique?
   c) What is division of labour?
   d) Define wages fund
e) State St. Simon’s Parable.
f) What do you mean by return to scale?
g) What do you mean by rarete?
h) Distinguish between economic goods and non-economic goods as stated by Menger.
i) Give the meaning of marginal pairs
j) Distinguish between inductive method and deductive method.
k) Define marginal productivity.

PART-B (Analytical)

Answer any four of the following questions in 15-20 sentences each. 5x5=25

2. Give an account of the factors that gave rise to physiocracy.
3. Write a note on Say’s law of market.
4. Examine the contributions of Proudhon to economic doctrines.
5. What are Gosse’s contributions?
6. Explain the contributions of Mrs. Joan Robinson to economic thought
7. Give a brief note on the Ricardian theory of value.

PART-C (Descriptive)

Answer any four of the following questions in four to five pages each 15x3=45

8. Discuss the contributions of Mercantilists to economic thought.
9. Critically examine the Malthusian theory of population
10. Bring out the main economic ideas of Karl Marx.
11. How does the Mrginal school deviate from the labour theory of value?
12. Examine the Marshallian concept of value determination.

V-SEMESTER
ENVIRONMENTAL ECONOMICS-I: PAPER5.2 (PART-A)
(Optional paper)

COURSE OBJECTIVES:
➢ To build a student’s knowledge of the conceptual and theoretical foundation of environmental economics as a special branch of economics.
➢ To appraise a student with emerging environmental issues and policies at national and international levels.

MODULE-I INTRODUCTION TO ENVIRONMENTAL ECONOMICS
- Individual preference regarding environmental protection-Social choice [2 Hrs]
- Cost benefit approach to environment. [3 Hrs]
- Public goods and private goods. Externality, Efficiency and markets-market failure, Pigovian fees, polluter pay principles, limits to growth theory. [4 Hrs.]

[Total: 12 Hours]

MODULE0II INTRODUCTION TO DEVELOPMENT ECONOMICS
- Meaning, factors in development, measures, obstacles to development [3 Hrs]
- Role of natural resources, population, capital, technology, entrepreneur and state in development [5 Hrs]
- Relationship between development and environment economics [4 Hrs]

[Total: 12 Hours]
### MODULE-III NATURAL RESOURCE ECONOMICS

- Basic concepts - current, potential and resource endowment, renewable. Non-renewable.  
  
  ![Image](3Hrs)

- Rate of Marketing and regeneration, Rate of extraction and environment cost, Rate of resource exploitation and technological progress.  
  
  ![Image](4 Hrs)

### III B.Sc GENETICS

**Theory Syllabus**

**Semester VI**

**PAPER VIII: APPLIED GENETICS**

**45 Hrs**

   
   ![Image](06 Hrs).

2. DNA finger printing:  
   
   ![Image](08hrs).


3. Genetic Resources:  
   
   ![Image](03 Hrs).

Germplasm, Classification, Germplasm activities, Organizations associated with germplasm (NBPGR, National Facility of Drosophila).

4. Centers of Diversity and Gene Bank:  
   
   ![Image](03 hrs).


5. Heterosis breeding in Animals:  
   
   ![Image](04 Hrs).

Cross breeding - Cross breads of exotic Holstein (HF) with local Amrit Mahal and Hallikar breeds. Grading - crossing Non-descriptive cattle Breeds (Ex: Malnad Gidda) with exotic Jersey and HF to breed graded animals. Cross breeding of strains in Poultry-Giriraja and Giriranl hybrids.

6. Heterosis in Crop Plants:  
   
   ![Image](04 Hrs).

Definition, Genetic Concept, Standard Heterosis Estimation of heterosis Inbreeding depression. General and Specific Combining Ability. Examples of Hybrid Vigor exploitation in rice. Maize, sorghum, cotton, chilly, onion, tomato, etc.

7. Introduction to plant tissue culture:  
   
   ![Image](10Hrs).

Embryo, anther and ovary cultures; shoot and root meristem cultures; Callus culture from undifferentiated cell; protoplast culture.

Economic benefit of tissue culture-resistance to pests and pathogens, improvement in nutritive value, etc.
8. Bioinformatics: 03 Hrs.
Interdiction, World Wide Web-Types of Web Sites. Internet-Types of Information’s
Bioinformatics in Genome analysis.

9. Genetics of Tropical diseases: 04 Hrs.
Genetic control thought reciprocal translocation, Biological control-Gabusia and Bacillus
thruungensis against mosquito larvae and Genetic basis of insecticide resistance.

III B.Sc GENETICS
Semester VI  PRACTICALS VIII 15 Prs.
1. Culturing & Handling: 01 Pr.
a. Mosquitoes (Normal)
b. Mosquito Strains Resistant to insecticides.
2. Observation of Malarial & Filarial parasites:
(Source. Dept. of Applied Genetics, Bangalore University)
3. Tissue Culturing: 01 Prs.
a. Preparation of nutrient medium
b. Culturing of plant meristamatic cells from Auxiliary Buds, Stems, Leaf, and Flower parts.
4. Floral Biology: 03 Prs.
a. Floral Biology of Self fertilized crops-Peas
b. Floral Biology of Cross fertilized crops-Maize
c. Pollen fertility.
5. Identification of Hybrid plants: 03 Prs.
Phenotypic Identification of Hybrid Plants using Gene markers and computation of Genetic
Purity Pot Culturing Parents and Hybrids of crops such as Cotton, Chilies, Onion, Tomato,
etc, (Source: KSSCA, Bangalore and IIHR, Hesaragatta).
6. Study Tour to Premier Plant and/or Animal Breeding Centers. 02 Prs.

III B.Sc GENETICS
Semester VI  Scheme of Examinations of Practicals VIII 30 Marks
1. Submission of three plant tissue cultures. 09
2. Dissect and draw the floral parts of the given material Flowers of any self fertilized Cross
fertilized plants 04
3. Identify and Comment on the Spotters: 3x4=12
   a) Malarial/Filarial Parasites
   b) Hybrid plant with parents
   c) Cross/Exotic Breeds of Poultry/Dairy/Piggery animals (Photos)
4. Educational Tour Report: On the visit to Premier Centers. 05

References:
   Harcourt/Academic press.
VI-SEMESTER

INDIAN ECONOMY-II: PAPER-6.1 (PART-B)
(Compulsory paper)

COURSE OBJECTIVES:

➢ To enable a student to have an overview of the working of the Indian economy.
➢ To enable a student to understand the changing trends in the Indian economy.
➢ To enable a student to understand the leading issues in India’s economic development

MOUDLE-I   FINANCIAL MARKETS

Features of the Indian money market [1 Hr]
Unorganized sector [1 Hrs]
Critical review of the performance of nationalisation of commercial banks. [3 Hrs]
Monetary policy of the R.B.I [2 Hrs]
Post-1991 banking reforms. [3 hrs]
I.D.B.I (I) S.E.B.I [1 Hrs]

MODULE-II FOREIGN TRADE
Changing structure of Indian exports and imports since independence. [2 Hrs]
Causes for disequilibrium in India’s balance of payments. [2 Hrs]
Trade policy of the Govt. of Indian since 1991 [3 Hrs]
Impact of W.T.O on India’s foreign trade tariffs, subsides and globalization, [5 Hrs]

[TOTAL: 12 HOURS]

MODULE-III GOVERNMENT FINANCE
Growth of public expenditure [1 Hrs]
Source of revenue for the Union Budget-problems of India’s tax system [2 Hrs]
Deficit financing-Trends and consequences [2 Hrs]
Federal Finance-divisions of resources, problems, review of the recommendations of the recent finance commission-Eleventh Finance Commission-Evaluation of India’s fiscal policy. [1 Hr]
Parallel economy-causes, impact, remedies. [2 Hrs]

[TOTAL: 12 HOURS]

MODULE-IV KARNATAKA ECONOMY
Overview of Karnataka Economy-G.D.P.P.C.I growth rate, H.D.I [1 Hrs]
Natural resources-land wise pattern, forest water, mineral resources [2 hrs]
Population dynamics-growth, composition, density, problems [2 Hrs]
Agricultural development in Karnataka, trends in agricultural production, Problems of agriculture in Karnataka [2 Hrs]

[TOTAL: 12 HOURS]

MODULE IV KARNATAKA ECONOMY
- Land holding, irrigation, finance and marketing [3 Hrs]
• Sericulture in Karnataka—growth, problems, projects [2 Hrs]

MODULE V KARNATAKA ECONOMY
• Recent industrial policy of the Govt. of Karnataka [2 Hrs]
• Small scale industry—growth and problems [2 hrs]
• Information technology (I.T) industry in Karnataka—role and growth. [1 hrs]
• Energy sector—growth and problems. [2 hrs]
• Karnataka finances—sources and problems [2 hrs]
• Tenth five year plan. [1 Hrs]
• Regional imbalance in Karnataka—indicators—social and economic, causes and remedies. [2 hrs]

[Total: 12 Hours]

READING LIST
1) Alak G- Indian Economy, Its nature and problems
2) Rudhra datt-Indian Economy
3) Dhingra I.C. – The Indian Economy
4) Misra SK and V.K. Puri-Indian Economy Its Development Experience
5) Uma Kapila-An overview of Indian Economics-volume I-IV
6) Govt. of Karnataka-Economic Survey (Latest year)
7) Govt. of Karnataka-Karnataka at Glance
8) O.D. Heggade-Karnataka Economy, Kannada
9) D.T. Nanje Gowda-Karnataka Economy (IEA) Conference

MODEL QUESTION PAPER
VI-SEMESTER
INDIAN ECONOMY-II PAPER-6.1 (PART-B)

Time: 3 hours Max. Marks: 90
90

Part-A (Conceptual)
1. Answer any 10 of the following questions in 5 to 6 sentences each 2x10=20
   a) What are hundis?
   b) Expand S.E.B.I
   c) State any two functions of I.D.B.I
   d) What are E.P.Z’s?
   e) State any two causes for rapid growth of imports
   f) Expand TRIPS
   g) What is tax: GDP ratio?
   h) Mention the sources of non-tax income of the Union government
   i) State the duties of VAT
   j) What it Karnataka’s ranking in HDI?
   k) What is the size of Karnataka’s population according to Census-2001?
   l) State the functions of PHU’s

PART-B (Analytical)
2. Explain the Post 1991 reforms in the banking sector
5x5=25
3. Explain the recent trade policy of the Government of India
4. What are the factors responsible for generation of black money?
5. Write a note on the land use pattern in Karnataka
6. Explain the growth of the I.T. Industry in Karnataka
7. What are the major recommendations of the 12th finance commission?

Part-C (Descriptive)

Answer any four of the following in not more than FOUR pages each 15x3=45
8. Critically examine the monetary policy of the RBI
9. What is globalization? Explain the impact on India’s foreign trade.
11. Explain the growth and problems of the sericulture sector in Karnataka.
12. State the indicators of regional disparities in Karnataka, Suggest remedies to reduce it.

VI-SEMESTER
ECONOMIC DOCTRINES-II PAPER-6.2 (B) (PART-B)
(Optional paper)

COURSE OBJECTIVES:
➢ To enable a student to understand the rich contributions of eminent thinkers to economic thought.
➢ To enable a student to understand the evolution of economic ideas over time.
➢ To enable a student to understand the importance of the economic ideas as developed by various thinkers.

MODULE –I KEYNESIAN SCHOOL
➢ Emergence of new economics [2 hrs]
➢ Keynes of departure from classicism [3 Hrs]
➢ Keynesian concept Consumption and investment functions, effective demand [3 Hrs]
➢ Post-Keynew-Schumpeter [2 Hrs]
➢ Gunnar Myrdal [2 Hrs]

[Total: 12 Hours]

MODULE-II WELFARE SCHOOL
➢ Pareto [1 Hrs]
➢ Hobson [1Hrs]
➢ Pigou [2 Hrs]
➢ J.R. Hicks [2 Hrs]
➢ Kenneth K Arrow [2 Hrs]
➢ Amartya Sen [2Hrs]

[Total: 10 Hours]

MODULE –III GROWTH SCHOOL
➢ Rosenstein-Rodan [2 Hrs]
➢ Nurkse [2 Hrs]
➢ Hirschman [2 Hrs]
➢ Rostow [2 Hrs]
➢ Leibenstein [2 Hrs]

[Total: 10 Hours]

MODULE-IV INDIAN ECONOMIC THOUGHT
➢ Kautilya [1 Hrs]
➢ Dadabhai Naoroji [1 Hrs]
- R.C. Dutt [1 Hrs]
- Mahatma Gandhi [3 Hrs]
- J.K. Mehta [2 Hrs]
- C.N. Vakil [2 Hrs]
- D.R. Gadgil [2 Hrs]
- Nehru [2 Hrs]
- P.R. Brahmananda [2 Hrs]

[Total: 16 Hours]

MODULE –V NOBEL ECONOMISTS
- Jan Tinbergen [2 Hrs]
- Ragnar Frisch [2 Hrs]
- Paul A. Samuelson [2 Hrs]
- Milton Friedman [2 Hrs]
- Simon Kuznets [2 hrs]
- W.W. Leontief [2 Hrs]

[Total: 12 Hours]

READING LIST:
1. Alexander Gray, The Development of Economic Doctrines
2. Arthur Mource, Early Economic Thought
3. Edmand Whittaker, Schools and Streams of Economics thought
4. Ganguly, Indian Economic Thought
5. Guidy and Rist, A History of Economic Doctrines
6. Hajeal T.N., History, of Economic Thought
7. Hancy L.H., History, of Economic Thought
9. Mc Connel J.W., Ideas of Great Economists
10. Puttaswamaiah, Nobel Economists
11. Spiegel H.W. The Development of Economic Thought
12. William J Barber, A History of Economics Thought

MODEL QUESTION PAPER
VI-SEMESTER
ECONOMIC DOCTRINES-II: PAPER-6.2 (B) (PART-B)

Time: 3 Hours        Max.
Marks:90

PART-A (Conceptual)
1. Answer any ten of the following questions in 5 or 6 sentence each: 2x10=20
   a. What is back wash effect?
   b. What do you mean by pump priming?
   c. State the meaning of consume’s surplus
   d. What is marginal efficiency of capital?
   e. Distinguish between backward and forward linkages.
   f. Give the meaning of social overhead capital
   g. What are directly productive activities?
   h. What are the components of effective demand?
   i. Give an idea of brain drain theory
   j. Distinguish between static economic and dynamic economics.
   k. What in N.E.W?
   l. What is Leontief paradox?
PART-B (Analytical)
Answer any four of the following questions in 15-20 Sentences each. 5x5=25
2. Sketch the Schumpeterian theory of capitalistic development
3. Bring out the main economic ideas of A.C. Pigou
4. Write a note on Leibenstein’s critical minimum effort theory
5. Explain the economic ideas of Nehru.
6. Describe the contributions of Milton Friedman to economic doctrines.
7. Explain the wage good model of P.R. Brahmananda.

PART-C (Descriptive)
Answer any four of the following questions in four to five pages each 15x3=45
8. Explain the main features of Keynesian revolution
9. Discuss the contributions of A.K. Sen to welfare economics
10. Critically examine the Rostow’s stages of growth
11. Examine the Gandhian doctrine of trusteeship
12. Discuss the contributions of Jan Tinbergen to economics

VI-SEMESTER
ENVIRONMENTAL ECONOMICS-II: PAPER-6.2 (C) (PART-B)
(Optional Paper)

COURSE OBJECTIVES:
➢ To build a student’s Knowledge of the conceptual and theoretical foundation of environmental economics as a special branch of economics.
➢ To appraise a student with emerging environment issues and polices at national and international levels.

MODULE-I SUSTAINABLE DEVELOPMENT
• Concept, definition, approaches-Hardwick, London School, safe minimum approach, Daly’s operational principles [3 Hrs]
• Indications goal, requirements and obstacles of sustainable development [3 hrs]
• Sustainable Vs conventional development. Economics of re-cycling, sustainable agriculture [3 Hrs]
• Policy approach to sustainable development political economy of sustainable development. Techno-centric, Eco-centric solution to sustainable development [3 Hrs] [Total: 12 Hours]

MODULE-II POPULATION AND ENVIRONMENT
• Population growth of species, human population theory of demographic transition, growth, density, migration industrialization, pollution, waste, [5 Hrs]
• Development of technology for population support, food security, ecology, of the poor, affluent [5 Hrs]
• Gender and environment [2 Hrs] [Total: 12 Hours]

MODULE –II ENVIRONMENTAL VALUATION AND POLICY INSTRUMENTS
• Need for environmental valuation-Methods Direct-contingent valuation-Indirect-averting behaviour approach, weak complementary approach, and Hedonic approach, Applications of approaches and policy instruments. [4 Hrs]
• Direct-pollution taxes, changes, and emission trading rights. Deposit refund systems, performance bond, and strict liability for pollution. [3 Hrs]
• Indirect-taxes on outputs of polluting activities, accelerated depreciation allowance, subsidies for adopting cleaner technologies, effluent treatment plants, eco-certification of products, environmental audit.
• Wide effects of environmental regulations[5 hrs]

[Total: 12 Hours]

MODULE-IV ENVIRONMENT ISSUES
• International environmental issues—pollution issues-global warming, acid rain, ozone depletion, desertification-causes, effects [3 Hrs]
• Ecological issues—tropical rain forests, endangered species. [2 hrs]
• International trade issues—domestic environment policy. [2 Hrs]
• Cost of production exportable. International co-operation. National issues—case studies, development and environmental issues.
• Upper Krishna Project-Narmada River Valley Project-National Parks, Sanctuaries, Project Tiger, Tanneries, Quarries [5 Hrs]

[Total: 12 Hours]

MODULE –V ENVIRONMENTAL POLICY IN INDIA
• Ministry of Environment and Forest, Govt, of India –Role, Environmental Legislation in India, Central Pollution Control Board [3 Hrs]
• Collective action, Role of NGO’s, Environment education and awareness. [4 Hrs]

[Total: 12 Hours]

READING LIST:
1. Alexander Gray, The Development of Economic Doctrines
2. Arthur Mource, Early Economic Thought
3. Edmand Whittaker, Schools and Streams of Economics thought
4. Ganguly, Indian Economic Thought
5. Guidy and Rist, A History of Economic Doctrines
6. Hajeal T.N., History, of Economic Thought
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9. Mc Connel J.W., Ideas of Great Economists
10. Puttaswamaiah, Nobel Economists
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12. William J Barber, A History of Economics Thought