

**RANI DURGAVATI VISHWAVIDHYALAYA, JABALPUR**  
**Department of Post – Graduate Studies and Research in Economics**

**Draft of Syllabus for Ph.D. Programme – Economics (Entrance and Course work)**

| <b>S. No.</b> | <b>Contents</b>   |
|---------------|---|
| 1.            | Highlights of Amendments in Ordinance 16                      |
| 2.            | Ph.D. Entrance (DET) Syllabus – Economics                     |
|               | <b>Pre-Ph.D. Coursework</b>                                   |
| 3.            | Paper 01 – Research Methodology                               |
|               | <b>Pre-Ph.D. Coursework</b>                                   |
| 4.            | Paper 02 – Review of Published research in the relevant field |
|               | <b>Pre-Ph.D. Coursework</b>                                   |
| 5.            | Paper 03 Computer Application                                 |
|               | <b>Pre-Ph.D. Coursework</b>                                   |
| 6.            | Paper 04 - Advance Courses in Economics                       |
|               | <b>Pre-Ph.D. Coursework</b>                                   |
| 7.            | Paper 05 – Comprehensive Viva Voce                            |

# **RANI DURGAVATI VISHWAVIDHYALAYA, JABALPUR**

## **Department of Post – Graduate Studies and Research in Economics**

**Draft of Syllabus for Ph.D. Programme – Economics (Entrance and Course work)**

**Date: 13/07/2018**

The Ph.D. Ordinance 16 has been revised and notified by the *Rani Durgawati Vishwavidyalaya, Jabalpur* on 24.05.2018. This would be effective from the session 2018-19.

Some of the major changes done in this revision of Ordinance are:

- DET 2018, would now be of 2hrs duration of 100 marks, with 100 multiple choice questions divided into two equal Section A for Research Methodology and Section B on Subject of Research.
- Minimum qualifying marks would be 50% (45% for ST/SC/OBC/PH) in Pre Ph.D. Entrance exam (DET).
- The Course Structure of the Pre -Ph.D. Entrance & Course Work has been revised.
- Passing Condition: 55% marks separately in each component of Pre Ph.D. course work.

The Pre-Ph.D. Course Work will now comprise of following five components.

| <b>Code</b>  | <b>Components</b>                                  | <b>Marks</b> | <b>Credits</b> |
|--------------|--|--------------|----------------|
| Paper 01     | Research Methodology                               | 100          | 4              |
| Paper 02     | Review of Published research in the relevant field | 50           | 3              |
| Paper 03     | Computer Application                               | 50           | 3              |
| Paper 04     | Advance Course in Economics                        | 50           | 3              |
| Paper 05     | Comprehensive Viva-Voce                            | 50           | 3              |
| <b>Total</b> |  | <b>300</b>   | <b>16</b>      |

**Note: 1 Credits =10 Contact Hours**

# RANI DURGAVATI VISHWAVIDHYALAYA, JABALPUR

## Syllabus for Ph.D. Entrance Exam

### Department of Post – Graduate Studies and Research in Economics

Total marks -100

Time Duration: 2 hours

The paper will be divided into two sections.

**Section A** - This section will comprise of research methodology, aptitude and reasoning test. This section will be of 50 marks from Unit I.

**Section B** - This section will have objective questions from the core economics subjects. This section will be of 50 marks from Unit II to XI.

\*\*\*\*\*

### **Ph.D. Entrance Test**

#### **Section A: Research Methodology**

##### **Unit I**

Concept of function and types of functions; Limit, continuity and derivative; Rules of differentiation; Interpretation of revenue, cost demand, supply functions; Elasticities and their types; Multivariable functions; Concept and types of production functions; Rules of partial differentiation and interpretation of partial derivatives; problems of maxima and minima in single and multivariable functions; Concept of integration; Simple rules of integration; Application to consumer's surplus and producer's surplus.

Determinants and their basic properties; Solution of simultaneous equations through Cramer's rule; Concept of matrix- their types, simple operations on matrices, matrix inversion and rank of a matrix; Concept of vector- its properties; Matrices and vectors; Introduction to input-output analysis; Difference equations-Solution of first order and second order difference equations;

Meaning, assumptions and limitations of simple correlation and regression analysis; Pearson's product moment and Spearman's rank correlation coefficients and their properties; Concept of the least squares and the lines of regression; Standard error of estimate and regression (applications only).

Deterministic and non-deterministic experiments; Various types of events-

classical and empirical definitions of probability; Laws of addition and multiplication; Conditional probability and concept of interdependence; Baye's theorem and its applications; Properties (without derivations) of Binomial, poisson and Normal distributions.

Basic concept of sampling-random and non- random sampling; Simple random; stratified random and p.p.s. sampling; Concept of an estimator and its sampling distribution; Desirable properties of an estimator; Formulation of statistical hypotheses - Null and alternative; Goodness of fit; Confidence intervals and level of significance; Hypothesis testing based on z,t,x<sup>2</sup> (Chi-square) and F tests; Type I and Type II errors.

## **Section B: Economics**

### **Unit II**

Elasticities of demand - theoretical aspects and empirical estimation; elasticity of supply; Theories of demand Revealed preference theory; Revision of demand theory by Hicks. Indirect utility functions; Recent developments in demand analysis Consumer's surplus; Inter-temporal consumption; Recent developments in demand. Elementary theory of price formation- demand and supply equilibrium; Cobweb theorem.

Production function Isoquants - Least cost combination of inputs; Elasticity of substitution; Euler's theorem; Technical progress and production function; Empirical work on production functions; Traditional and modern theories of costs - Empirical evidence; Derivation of cost functions from production function; derived demand for factors.

Price and output determination: Perfect competition; Monopoly - short run and long run equilibrium, price discrimination, welfare aspects, monopoly control and regulation. Critical evaluation of marginal analysis; Baumol's sales revenue maximization model; Wiliamson's model of managerial discretion; Marris model of managerial enterprise.

Marginal productivity theory; Theory of distribution in imperfect product and factor markets; Determination of rent, wages, interest and profit; Macro theories of distribution - Ricardian, Marxian, and Kaldor's.

Pigovian welfare economics; pareto optimal conditions; Social welfare function; Compensation principle; Inability to obtain optimum welfare - Imperfections, market failure, decreasing costs, uncertainty and non-existent and incomplete markets; Theory of Second Best - Arrow's impossibility theorem.

Partial and general equilibrium, Walrasian excess demand and input-output approaches to general equilibrium, existence, stability and uniqueness of equilibrium and general equilibrium, Stolper-Samuelson theorem, relationship between output mix and real factor prices.

### **Unit III**

Circular Flow of Income in two,-three-and four-sector economy; different forms

of national income accounting - Social accounting, input-output accounting, flow of funds accounting and balance of payments accounting.

Keynes psychological law of consumption - implications of the law; short-run and long-run consumption function; Empirical evidence on consumption function; Income consumption relationship.

Marginal efficiency of investment and level of investment; Marginal efficiency of capital and investment - long run and short run; The accelerator and investment behaviour - impact of inflation; Influence of policy measures on investment - empirical evidence.

RBI approach to money supply; High powered money and money multiplier; budget deficits and money supply; money supply and open economy; control of money supply.

Classical approach to demand for money - Quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach, transaction, precautionary and speculative demand for money - aggregate demand for money; Derivation of LM curve.

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

Post-Keynesian approaches to demand for money - Patinkin and the Real Balance Effect, approaches of Baumol and Tobin; Friedman and the modern quantity theory; Crisis in Keynesian economics and the revival of monetarism.

Classical Keynesian and Monetarist approaches to inflation; Structuralist theory of inflation; Philips curve analysis - Short run and long run Philips curve; Samuelson and Solow - the natural rate of unemployment hypothesis; Tobin's modified Philips curve; Adaptive expectations and rational expectations; Policies to control inflation.

Theories of Schumpeter, Kaldor, Samuelson and Hicks, Goodwin's model; Control of business cycles - relative efficacy of monetary and fiscal policies.

#### **Unit IV**

Economic growth and development - Factors affecting economic growth : capital, labour and technology; Growth models - Harrod and Domar, instability of equilibrium; Neo-classical growth models - Solow and Meade, Mrs. Joan Robinson's growth model; Cambridge criticism of Neo-classical analysis of growth.

Technological progress - embodied and disembodied technical progress; Hicks, Harrod; learning by doing, production function approach to the economic growth; Total factor productivity and growth accounting: Growth models of Kaldor.

Development and underdevelopment - Perpetuation of underdevelopment;

Poverty - Absolute and relative; Measuring development and development gap - Per capita income, inequality of income, Human development index and other indices of development and quality of life - Food security, education, health and nutrition; Human resource development; Population problem and growth pattern of Population - Economic development and institutions.

Classical Theory of development - contributions of Adam Smith, Ricardo, Malthus and James Mill, Karl Marx and development of capitalistic economy - theory of social change, surplus value and profit; Immutable laws of capitalist development; Role of credit, profit and degeneration of capitalism; Structural analysis of development.

Partial theories of growth and development - vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis, low-income equilibrium trap; Dualism - technical behavioral and social; Ranis and Fei model; Dixit and Marglin model, Kelly et. al. Model; Dependency theory of development; Structural view development.

International trade as engine of growth; Static and dynamic gains from trade; prebisch, Singer and Myrdal thesis vs. free trade; Export-led growth; Dual gap analysis; Balance of payments; Tariffs and effective protection; Post-GATT international economic order; WTO and developing countries.

Role of monetary and fiscal policies in developing countries - Prior savings, inflation and growth - Empirical evidence; External resources - FDI, aid vs. trade, technology inflow; MNC activity in developing countries; Borrowings - domestic and external; Burden of borrowing - IMF and World Bank policies in developing countries.

Need for investment criteria in developing countries - present vs., future, Alternative investment criteria; Cost-benefit analysis, Shadow prices, Project evaluation and UNIDO guidelines.

Need for planning - democratic, decentralized and indicative planning, micro-level planning Review of Indian plan models and planning.

### **Unit V**

Role of Government in organized society; Changing perspective - government in a mixed economy: public and private sector, cooperation or competition; Government as an agent for economic planning and development; Government as a tool for operationalizing the planning process.

Private and public mechanism for allocating resources; Problems for allocating resources; Problems of preference revelation and aggregation of preferences; Voting systems; Arrow impossibility theorem; An economic theory of democracy; Politico-economic-bureaucracy.

Poverty alleviation; Provision of infrastructural facilities, removing distributional inequalities and regional imbalances. Wagner's law of increasing state activities; Wiesman - peacock hypothesis; Pure theory of public

expenditure; Structure and growth of public expenditure; Criteria for public investment; Social cost-benefit analysis - project evaluation, Estimation of costs, discount rate; Reforms in expenditure budgeting; Programme budgeting and zero base budgeting.

Theory of incidence; Alternative concepts of incidence - Allocative and equity aspects of individual taxes; Benefit and ability to pay approaches; Theory of optimal taxation; Excess burden of taxes; Trade-off between equity and efficiency; The problem of double taxation.

Classical view of public debt; Compensatory aspect of debt policy; Burden of public debt; Sources of public debt; Debt through created money; public borrowings and price level; Crowding out of private investment and activity; principles of debt management and repayment.

Objectives of fiscal policy - full employment, anti-inflation, economic growth, redistribution of income and wealth; Interdependence of fiscal and monetary policies; Budgetary deficits and its implications; Fiscal policy for stabilization - automatic vs. discretionary stabilization; Alternative measures of resource mobilization and their impact on growth, distribution and prices; Balanced budget multiplier.

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

Indian tax system; Revenue of the Union, States and local bodies; Major taxes in India: base of taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, reforms in direct and indirect taxes, taxes on services; Non-tax revenue of Centre, State and local bodies; Analysis of Centre and State Government budgets; Lack of flexibility in Centre and State budgets, shrinking size of development finance through budgets; Trends in public expenditure and public debt; Fiscal crisis and fiscal sector reforms in India; Reports of Finance Commissions in India.

## **Unit VI**

The pure theory of international trade - Theories of absolute advantage, comparative advantage and opportunity costs, modern theory of international trade; Theorem of factor price equalization; Empirical testing of theory of absolute cost and comparative cost -Heckscher-Ohlin theory of trade.

Measurement of gains from trade and their distribution; Concepts of terms of trade, their uses and limitations; Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries; The Theory of Interventions; Economic effects of tariffs and quotas on national income, output employment, terms of trade, income distribution;

Balance of payments on trading partners both in partial and general equilibrium analysis. The political economy of non-tariff barriers and their implications; nominal, effective and optimum rates of tariffs-their measurement, impact and welfare implications; Trade under imperfectly competitive market.

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

Forms of economic cooperation; Reforms for the emergence of trading blocks at the global level; Static and Dynamic effects of a customs union and free trade areas; Rationale and economic progress of SAARC/SAPTA and ASEAN regions. Problems and prospects of forming a customs union in the Asian region. Regionalism (EU,NAFTA); Multilateralism and WTO; Rise and fall of gold standard and Bretton-woods system; Need, adequacy and determinants of international reserves; Conditionality clause of IMF; Emerging International Monetary System with special reference to Post-Maastricht developments and developing countries; Reform of the International Monetary System. India and developing countries; Theory of short-term capital movements and East-Asian Crisis and lessons for developing countries; International trade and financial institutions- Functions of GATT/WTO (TRIPS, TRIMS), UNCTAD, IMF, World Bank and Asian Development Bank; WTO and World Bank from the point of view of India.

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

### **Unit VII**

Objectives and strategy of planning; Failures and achievements of Plans; Developing grass-root organizations for development - Panchayats, NGOs and pressure groups.

Broad demographic features of Indian population, Rural-urban migrations; Urbanization and civic amenities; Poverty and Inequality.

Energy; Social infrastructure - education and health; Environment; Regional imbalance; Issues and policies in financing infrastructure development.

Institutional Structure - land reforms in India; Technological change in agriculture - pricing of agricultural inputs and output; Terms of trade between agriculture and industry; Agricultural finance policy; Agricultural Marketing and Warehousing; Issues in food security - policies for sustainable agriculture

Industrial policy; Public Sector enterprises and their performance; Problem of sick units in India; Privatisation and disinvestment debate; Growth and pattern of industrialisation; Small-scale sector; Productivity in industrial sector; Exit policy - issues in labour market reforms; Approaches for employment generation.

Analysis of price behaviour in India; Financial sector reforms; Interest rate policy; Review of monetary policy of RBI; Money and capital markets; Working of SEBI in India.

Structure and direction of foreign trade; Balance of payments; Issues in export-import policy and FEMA; Exchange rate policy; Foreign capital and MNCs in India; The progress of trade reforms in India.

Rationale of internal and external reforms; Globalisation of Indian economy; W.T.O. and its impact on the different sectors of the economy; Need for and issues in good governance; Issues in competition and Safety nets in Indian economy.

### **Unit VIII**

Concept and organization of a firm - ownership, control and objectives of the firm; Passive and active behaviour of the firm. Seller's concentration; Product differentiation; Entry conditions; Economies of scale; Market structure and profitability; Market structure and innovation; Theories of industrial location - Weber and Sargent Florence; Factors affecting location.

Product pricing - Theories and evidence; investment expenditure - Methods of evaluating investment expenditure; Theories and empirical evidence on Mergers and acquisitions (M & As) and diversification.

Growth of the firm - Size and growth of a firm; Growth and profitability of the firm; Constraints on growth; productivity, efficiency and capacity utilization - Concept and measurement, Indian situation.

Classification of industries; Industrial policy in India -Role of Public and private sectors; Recent trends in Indian industrial growth; MNCs and transfer of technology; Liberalization and privatization; Regional industrial growth in India; Industrial economic concentration and remedial measures; Issues in industrial proliferation and environmental preservation; Pollution control policies.

Owned, external and other components of funds; Role, nature, volume and types of institutional finance - IDBI, IFCI, SFCs, SIDC, commercial banks, etc.; Financial statement - Balance sheet, Profit and loss account; assessment of financial soundness, ratio analysis.

Structure of industrial labour; Employment dimensions of Indian industry;

Industrial legislation; Industrial relations; Exit policy and social security; Wages and problem of bonus - labour market reforms.

Iron and Steel; Cotton textiles; Jute; Sugar; Coal; Cement and engineering goods; Development of small-scale and cottage industries in India.

### **Unit IX**

Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Interdependence between agriculture and industry - some empirical evidence; Agricultural development, poverty and environment.

Livestock economics - Livestock resources and their productivity; problems of marketing; White revolution; fishery and poultry development; Forestry, Issues and problems in rural industrialization and development of agro-based industries.

Use of land, water and energy; Rural transport, communication, banking, extension services, role, modes and problems of rural electrification; Rural social infrastructure, - education and health and information dissemination. Principles of land utilization, land distribution-structure and trends, land tenures, Tenancy and Crop sharing, Problems of marginal and small farmers, Land reforms measures and performance.

Agricultural production - Resource use and efficiency; Production function analysis in agriculture; Factor combination and resource substitution; Cost and supply curves; Size of farm and laws of returns - Theoretical and empirical findings; Farm budgeting and cost concepts; Supply response of individual crops and aggregate supply; Resource use efficiency in traditional agriculture; Technical change, labour absorption and gender issues in agricultural services.

Rural labour supply; Interlocking of factor markets; Mobility of labour and segmentation in labour markets; marginalisation of rural labour; Nature, extent and trends in rural unemployment; Agricultural wages in India; Male-female wage differences; Non-agricultural rural employment - Trends and determinants. Marketing and state policy; Agricultural markets and marketing efficiency - Marketing functions and costs; Market structure and imperfections; Regulated markets; Marketed and marketable surplus; Behaviour of agricultural prices - Cobweb model; Price and income stability; State policy with respect to agricultural marketing; Warehousing; Prices; Need for state intervention; Objectives of agricultural price policy - Instruments and evaluation; Food security in India and public distribution system.

Recent trends in agricultural growth in India; Inter-regional variations in growth of output and productivity; Cropping pattern shifts; Supply of inputs - Irrigation, power, seed and fertilizers; Pricing of input and role of subsidies; Distribution of gains from technological change; Role of Public investment and capital formation in Indian agriculture; Strategy of agricultural development and technological progress; International trade in agricultural commodities; Commodity agreements - Role of World Trade Organization; Issues in

liberalization of domestic and international trade in agriculture - Nature and features of agri-business; Role of MNCs; Globalization of Indian economy and problems and prospects of Indian agriculture; Impact of World Trade Organisation on Indian agriculture.

### **Unit X**

Nature, meaning and scope of econometrics; Simple and general linear regression model- Assumptions, Estimation (through OLS approach) and properties of estimators; Gauss-Markov theorem; Concepts and derivation of  $R^2$  and adjusted  $R^2$  Concept and analysis of variance approach and its application in regression analysis; Estimation of non-linear equations-parabolic, exponential, geometric, hyperbolic.

Nature, test, consequences and remedial steps of problems of heteroscedasticity; multicollinearity and auto-correlation; Problems of specification error; Errors of measurement.

Dummy variable technique - Testing structural stability of regression models comparing to regressions, interaction effects, seasonal analysis use of dummy variables, regression with dummy dependent variables.

Autoregressive and distributed lag models - Koyak model, partial adjustment model, adaptive expectations; Instrumental variables; Problem of auto-correlation - Application; Almon approach to distributed-lag models; Error correlation mechanism.

The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification - order and rank conditions; Methods of estimating simultaneous equation system; Recursive methods and OLS; Indirect least squares (ILS); 2SLS, 3SLS and ML methods - Applications.

Stationarity, unit roots, co-integration-surious regression, Dickey-Fuller test, Engle-Granger test, Random walk model, Forecasting with ARIMA modelling; Box-Jenkins methodology.

### **Unit XI**

Meaning and scope of demography; Components of population growth and their inter-dependence; Measures of population change; Structure, distribution and sources of population data; Theories of population - Malthus, Optimum theory of population; Theory of demographic transition - Views of Medows, Enke and Simon.

Population trends in the twentieth century; Population explosion - Threatened or real, distant or imminent; International aspects of population growth and distribution; Pattern of age and sex structure in more developed and less developed countries; Determinants of age and sex structure; Demographic effects of sex and age structure, economic and social implications; Age Pyramids and projections - Individual aging and population aging.

Importance of study of fertility - Total fertility rate[ Gross reproduction rate and

net reproduction rate; Levels and trends of fertility in more and less developed countries; Factors affecting fertility - Socio-economic factors, economic status, health, education, nutrition, caste, religion, race, region, rural-urban and status of husband and wife. Mortality - Death rates, crude and age-specific; Mortality at birth and infant mortality rate; Levels and trends in more and less developed countries; Sex and age pattern of mortality; Factors for decline in mortality in recent past; Life table - Construction and uses; Concepts of stable population; Methods of population projection.

Concepts and types - Temporary, internal and International; International migration - Its effect on population growth and pattern; Factors affecting migration; Theories of migration related to internal migration; Urbanization - Growth and distribution of rural-urban population in developed and developing countries.

Study of census in India - Methodology and characteristics of census; National Family Health Survey 1 and 2 and Rapid Household Survey; Changing characteristics of population in India; Population growth rates, trends and regional variations in sex ratio; Age structure of population, foetal, infant and child mortality rates; Maternal mortality rates; Life expectancy; Appraisal of Kerala model; Pattern of Migration and Urbanization in India.

Population, economy and environment linkages - Population, health, nutrition productivity nexus; Population and human development issues; Culture and fertility, Education and fertility, Demography and household economic behaviour.

Evolution of population policy in India - The shift in policy from population control to family welfare, to women empowerment; Family planning strategies and their outcomes; Reproductive health maternal nutrition and child health policies; Population and strategies for human development of different social groups; Social impact of new reproductive technologies and their regulation; The new population policy; Tasks before the National Population Commission.

# **RANI DURGAVATI VISHWAVIDHYALAYA, JABALPUR**

## **Pre – Ph.D. Course Work in Economics**

### **Paper 01 – Research Methodology**

**Max Marks: 100 (4 Credits)**

#### **UNIT I : Introduction & Research Design**

Nature and Objectives of Research, Methods of Research: historical, descriptive and experimental, research process, research approaches, criteria for good research. Meaning of research design, need of research design, features of good design, various research designs, basic principles of experimental designs, designs of experiments.

#### **UNIT II : Data Collection & Analysis**

Types of Data, methods and techniques of data collection, primary and secondary data, Meta-Analysis, historical methods, content analysis, devices used in data collection, pilot study and pretext of tools, choices of data collection methods.

#### **UNIT III : Processing and Analysis of Data**

Measures of Central Tendency, Measures of Dispersion, Measures of Variation. Measures of Central Tendency vs. Measures of Dispersion, Normal Distribution, Measures of Skewness and interpretation, Correlation and Regression: Types and applications, Chi-square test: its purpose and use.

#### **UNIT IV : Paper Writing and Report Generation**

Basic concept of paper/thesis writing report generation, writing research abstract, introduction, review of literature, result, conclusion, concepts of bibliography and references, significance of report writing, steps of report writing. Types of research reports, Methods of presentation of report. Format of publication in Research journal.

#### **UNIT V : Computer Applications**

Application of computers in research, Generating charts/graphs in Microsoft Excel, Power Point Presentation, Web Search: Introduction to Internet, Use of Internet and WWW. Using search engines like Google, Yahoo, etc.

**Note: The examiner shall set total ten questions (two questions from each unit) covering the entire Syllabus. The candidate shall be required to attempt any five questions selecting at least one question from each unit.**

Reference Books:

1. Kothari. C. R., "Research Methodology (sMethods and Techniques)", New Age Publisher.
2. Donald. H., Pamela S. Schindler, "Bussiness Research Methods", 8/e Tata McGraw Hill Co. Ltd
3. Bendat and Piersol, "Random Data: Analysis and Measurement Procedures", Wiley Interscience
4. Raymond Greenlaw, " Inline/Online: Fundamentals of Internet and the World Wide Web", Tata McGraw Hill Co. Ltd
5. John W. Creswell, "Research Design", Sage Publications, INC
6. Trivedi R. N. & Shukla D. P., " Research Methodology", College Book Depo, Jaipur
7. Bill Taylor, Gautam Sinha & Taposh Ghoshal," Research Methodology", Prentice Hall of India Private, New Delhi

# **RANI DURGAVATI VISHWAVIDHYALAYA, JABALPUR**

## **Pre – Ph.D. Course Work in Economics**

### **Paper 02 – Review of Published Research in the Relevant Field**

**Max Marks: 50 (3 Credits)**

For this paper candidates will have to review literature in an area of research from refereed journals or the journals indexed on UGC and will prepare a research proposal and submit a report to the university at the end of the course work. The selection of problem and preparation of the proposal will be in consultation with research guide.

\*\*\*\*\*

# **RANI DURGA VATI VISHWAVIDHYALAYA, JABALPUR**

## **Pre – Ph.D. Course Work in Economics**

### **Paper 03 - Computer Application**

**Max Marks: 50 (3 Credits)**

#### **UNIT I : INTRODUCTION TO COMPUTER ORGANIZATION**

History and development of computer system concept, Characteristics, Capability and limitations. Generation of computers. Types of PC's, desktops, Laptops, Notebook, Work stations and their characteristics. Basic components of a computer system Control Unit, ALU, Input/ Output functions and characteristics, memory RAM, ROM, EPROM, PROM.

#### **UNIT II : INPUT AND OUTPUT DEVICES**

Input Devices: Keyboard, Mouse, Trackball, Joystick, Digitizing Tablet, Scanner, Digital Camera, MICR, OCR, OMR, Bar Code Reader, Voice Recognition, Light Pen, Touch Screen.

Output Devices: Monitors; characteristics and types of monitors, Video Standard, VGA, SVGA, XGA, LCD Screen etc. Printers; Daisy Wheel, Dot Matrix, Inkjet, Laser, Line Printer, Plotter, Sound Card and Speakers.

#### **UNIT III : STORAGE DEVICES**

Storage fundamental; primary and secondary, Various Storage Devices, Magnetic Tape, Cartridge Tape, Data Drives, Hard Drives, Floppy Disks, CD, VCD, CD-R, CD-RWDVD, DVD-RW, Zip Drive.

#### **UNIT IV : OPERATING SYSTEM: MS-OFFICE**

Introduction to Word Processing, MS Word; Features, Creating, Saving and Operating Multi Document Windows, Editing, Selecting, Inserting, Deleting and Moving Text. Previewing and Printing Documents. Formatting Documents.

Excel and Worksheet, creating and entering data into worksheet, Toolbars and Menus, Keyboard shortcuts, Working with single and multiple workbooks, copying, renaming, moving, adding and deleting. Working with formulas, cell referencing, auto sum, copying formulas, absolute and relative addressing.

Power Point; features, creating presentation using slide master and templates, working with slides, editing and formatting text, inserting clip art pictures and charts, slide sorter, slide transition effect and animation effects.

#### **UNIT V : INTRODUCTION TO INTERNET**

Internet; Concept, Protocol, Dial-up Connectivity, leased line, VSAT, Broadband, URLs, Domain names, Portals. E-mail, Pop & web based e-mails. Basics of sending and receiving e-mails. E-mails and Internet Ethics, Computer Virus, Antivirus Software, Web Browsers, e-book and e-journals.

**Note: The examiner shall set total ten questions (two questions from each unit) covering the entire Syllabus. The candidate shall be required to attempt any five questions selecting at least one question from each unit.**

#### **SELECT READINGS :**

1. Rajasekaran, S. (1986), Numerical Methods in Science and Engineering, A.H. Wheeler, Allahabad.
2. Sanders, D.H. (1988), Computers Today, McGraw-Hill (3rd Edition), New York.
3. Sinha, P.K. (1992), Computer Fundamentals, BPB Publications New Delhi.
4. Rajaraman, V. (1996), Fundamentals of Computers, Prentice Hall of India, New Delhi.
5. Lipschultz, M.M. and S. Lipschultz (1982), Theory and Problems of Data Processing, Schum's Outline Series, McGraw Hill, New York.
6. Schildt, H. (1987), C Made Easy, McGraw Hill Co., New York.
7. Levin, R.I. and C.A. Kifpatrick, Quantitative Approaches to Management.
8. Wood, M.B. Introducing Computer Security.

# **RANI DURGAVATI VISHWAVIDHYALAYA, JABALPUR**

## **Pre – Ph.D. Course Work in Economics**

### **Paper 04 – Advance course in Economics**

**Max Marks: 50 (3 Credits)**

#### **Unit I**

Recent developments in demand analysis (pragmatic approach and linear expenditure systems); Consumer's surplus; Inter-temporal consumption; Recent developments in demand. Elementary theory of price formation- demand and supply equilibrium; Cobweb theorem; lagged adjustment in interrelated markets. Technical progress and production function; Cobb-Douglas, CES, VES and Translog production function and their properties; Critical evaluation of marginal analysis; Baumol's sales revenue maximization model; Williamson's model of managerial discretion; Marris model of managerial enterprise. Individual behaviour towards risk, expected utility and certainty equivalence approaches, risk and risk aversion - sensitivity analysis, gambling and insurance, the economics of insurance cost and risk, risk pooling and risk spreading, mean-variance analysis and portfolio selection.

#### **Unit II**

Neo-Classical and Keynesian views on interest; The IS-LM model; Extension of IS-LM model with Government sector; Relative effectiveness of monetary and fiscal policies; Extension of IS-LM models with labour market and flexible prices. Classical Keynesian and Monetarist approaches to inflation; Structuralist theory of inflation; Philips curve analysis - Short run and long run Philips curve; Samuelson and Solow - the natural rate of unemployment hypothesis; Tobin's modified Philips curve; Adaptive expectations and rational expectations; Policies to control inflation.

#### **Unit III**

Human development index and other indices of development and quality of life - Food security, education, health and nutrition; Human resource development; Population problem and growth pattern of Population - Economic development and institutions.; Ranis and Fei model; Dixit and Marglin model, Kelly et. al. Model; Dependency theory of development; Structural view development.

#### **Unit IV**

Social cost-benefit analysis - project evaluation, Estimation of costs, discount rate; Reforms in expenditure budgeting; Programme budgeting and zero base budgeting. Finance Commission and Planning Commission; Analysis of Centre and State

Government budgets; Lack of flexibility in Centre and State budgets, shrinking size of development finance through budgets; Trends in public expenditure and public debt; Fiscal crisis and fiscal sector reforms in India; Reports of Finance Commissions in India.

### Unit V

A critical review of the monetary approach to the theory of balance of payments adjustment; Foreign trade multiplier with and without foreign repercussions and determination of national income and output; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developing countries. Recent changes in the direction and composition of trade and their implications; Rationale and impact of trade reforms since 1991 on balance of payments, employment and growth, problems of India's international debt; Working and regulations of MNCs in India.

**Note: The examiner shall set total ten questions (two questions from each unit) covering the entire Syllabus. The candidate shall be required to attempt any five questions selecting at least one question from each unit.**

### **BASIC READING LIST :**

1. Kreps David M. (1990), A Course in Microeconomic Theory, Princeton University press. princeton.
2. Koutsoyiannis, A.(1979), Modern Microeconomic (2nd Edition), Macmillan press, London.
3. Ackley,G.(1978), Macro Economics : Theory and Policy, Macmillan, New York.
4. Blackhouse, R. and A. Salansi (Eds.) (2000) Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
6. Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
7. Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University Press, Stanford.
8. Gillis, M.,D.H. Perkins, M. Romer and D.R. Snodgrass (1992), Economics of Development, (3rd Edition), W.W. Norton, New York.
9. Higgins, B. (1959), Economic Development, W.W. Norton, New York.
10. Hogendorn, J. (1996), Economic Development, Addison, Wesley, New York.
11. Buchanan, J.M. (1970), The Public Finances, Richard D. Irwin, Homewood.
12. Musgrave, R.A. (1959), The Theory of Public Finance, McGraw Hill, Kogakhusa, Tokyo.

13. Shoup, C.S. (1970), Public Finance, Aldine, Chicago.
14. Bhagwati, J. (Ed.) (1981), International Trade, Selected Readings, Cambridge, University Press, Massachusetts.
15. Carbough, R.J. (1999), International Economics, International Thompson Publishing, New York.
16. Kenen, P.B. (1994), The International Economy, Cambridge, University Press, London.
17. 9. Krugman, P.R. and M. Obstfeld (1994), International Economics : Theory and Policy, Glenview, Foresman.
18. Salvatore, D. (1997), International Economics, Prentice Hall, Upper Saddle River, N.J. New York.

\*\*\*\*\*

# **RANI DURGAVATI VISHWAVIDHYALAYA, JABALPUR**

## **Pre – Ph.D. Course Work in Economics**

### **Paper 05 – Comprehensive Viva-Voce**

**Max Marks : 50 (Credit 3)**

Candidate is expected to face a comprehensive viva-voce on the elective subject and literature review report submitted to the university. The presentation need to be prepared and presented in consultation with research guide.

\*\*\*\*\*