

II. ECONOMICS (HONOURS)

Scheme :

Four Papers	Duration	Max. Marks	Min. Pass Marks
Paper V	3 hours	100	
Paper VI	3 hours	100	
Paper VII	3 hours	100	160
Paper VIII	3 hours	100	

Economics

Note : Each paper will have 3 questions from each section. In addition to these nine questions (3 questions from each section) there shall be one multiple choice/objective type question. This question shall be compulsory.

A candidate will be required to attempt five questions in all selecting at least one question from each section and one compulsory multiple choice/objective. Each question will carry 20 marks.

The multiple choice/objective type question will consist of 20 questions of one mark each.

Paper – (V) Macro Economic Theory

Section-A

Macroeconomic Variables; National Income: Concepts, Components and Measurement, Inter-relationship between Three Measures of National Income; Measurement of Economic Welfare; Circular Flow of National Income and Expenditure.

Section-B

Money-Concept and Functions; Quantity Theory of Money- Classical, Keynesian, and Milton Friedman; Inflation: Concept, Causes, Kind and Remedial Measures; Philips Curve Analysis; Consumption Hypotheses; The Classical Model of Output and Employment Determination; Simple Keynesian Model of Income Determination; Multiplier: Concept, Static and Dynamic Multiplier; IS-LM model.

Section-C

Theories of Business Cycle: Multiplier – Accelerator Interaction Models of Samuelson and Hicks; Supply of Money: Measurement, Components, and Determinants, High-Powered Money and Money Multiplier; Commercial Banks and Credit Creation; Central Bank: Credit Control and Monetary Policy.

Books recommended:

1. Errol D;Souza, Macroeconomics, Pearson Education.
2. Richard,T.Froyen, Macro Economics: Theories and Policies, Pearson Education.
3. Gregory Mankiw, Macroeconomics, CBS Publishers, New Delhi.
4. Robert J Gorden, Macroeconomics, Harper Collins.
5. Rana & Verma, Macroeconomics, Vishal Publishing House (Hindi and English medium).

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Scheme :

Four Papers	Duration	Max. Marks	Min. Pass Marks
Paper V	3 hours	100	
Paper VI	3 hours	100	
Paper VII	3 hours	100	160
Paper VIII	3 hours	100	

Note : Each paper will have 3 questions from each section. In addition to these nine questions (3 questions from each section) there shall be one multiple choice/objective type question. This question shall be compulsory.

A candidate will be required to attempt five questions in all selecting at least one question from each section and one compulsory multiple choice/objective. Each question will carry 20 marks.

The multiple choice/objective type question will consist of 20 questions of one mark each.

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B.A. Part-II (Hons)

Paper – (VI) Environmental Economics

Section –A

Environmental Economics: An Introduction; Review of Microeconomics and Welfare Economics; The Theory of Externalities: Pareto Optimality and Market Failure in the Presence of Externalities; Property Rights and the Coase Theorem; Sustainable Development: Concepts and Measurement.

Section-B

Development and Environment: The Environment Kuznets Curve; Trade and Environment; Environmental Problems; Trans-boundary Environmental Problems: Global Warming and Climate Change; Methods of Environment Valuation: Hedonic Pricing, Contingent Valuation Method and Travel Cost Method.

Section-C

International Environmental Policy: Conventions and Treaties, UN Effort to Protect the Environment, Stockholm, Rio, Johansberg, Agenda 21, OECD Environmental Committee Report, Convention on Biodiversity, Climatic Conventions, Kyoto; Environmental Governance in India; WTO and Environment.

Readings:

1. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2nd edition, 2010.
2. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W. W. Norton, 5th edition, 2005.
3. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3rd edition, 2003.
4. Maureen L. Cropper and Wallace E. Oates, 1992, "Environmental Economics: A Survey", *Journal of Economic Literature*, Volume 30, pp. 675-740.

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Agencies for Agricultural Credit - Cooperative Banks, NABARD, RRBs and Commercial Banks, Marketing and support prices. Subsidy in agriculture and public distribution system.

Section 'B'

Industries Role of Cottage and Small Scale Industries, Recent Industrial Policy.

Industrial Finance - IFCI, IDBI, ICICI, SFCs, SIDCs and Commercial Banks.

Labour and Industrial Relations Industrial Disputes and Trade Union Movement. Policy Security Programmes.

Foreign Trade Trends. Composition, Foreign Trade Policy.

Foreign Aid-Size and Utilization, Problems of repayment.

Section 'C'

Review of Economic Progress under Plans, Trends in National Income Development of Infrastructure-Power, Transport, Education and Health Distribution of Income, Poverty, Unemployment, Regional Disparities.

Books Recommended :

1. A.N. Agarwal : **India Economy**, Latest Ed. Willey Easter Ltd. New Delhi.
2. A.N. Agarwal : **Bhartiya Arthvyastha**, (Latest Ed.)
3. Laxmi Narayan Nathuramka : **Bhartiya Arthvyavastha**, (Latest Ed.)
4. Rudra Dutta and K.P. M. Sunderam : **Indian Economy**, (Latest Ed.)
5. S.K. Mishra & V.K. Puri : **Indian Economy**.
6. Government of India : **Economic Survey** (Latest Ed.)

Scheme :

Four Papers	Duration	Max. Marks	Min. Pass Marks
Paper V	3 hours	100	
Paper VI	3 hours	100	
Paper VII	3 hours	100	160
Paper VIII	3 hours	100	

Note : Each paper will have 3 questions from each section. In addition to these nine questions (3 questions from each section) there shall be one multiple choice/objective type question. This question shall be compulsory.

A candidate will be required to attempt five questions in all

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selecting at least one question from each section and one compulsory multiple choice/objective. Each question will carry 20 marks.

The multiple choice/objective type question will consist of 20 questions of one mark each.

~~Paper VII - International Trade~~

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B.A. Hons.- Part- II

Paper – (VII) Theory of International Trade

Section-A

Distinguishing Features of International Trade. Theories of International Trade-Adam Smith, Ricardo, Mill, Haberler and Heckscher-Ohlin. Imperfect Competition, Economies of Scale and International Trade. Empirical Tests of Classical and Modern Trade Theories. Gains from Trade.

Section-B

Free Trade v/s Protectionism. Methods of Protection- Tariffs and Quota (Partial and General Equilibrium Effects). New Protectionism- Non-tariff Barriers and their Economic Effects. Forms of Economic Integration. Theory of Customs Union. Regional Trading Blocks. Trade Problems of Developing Nations. Terms of Trade. UNCTAD.

Section-C

Foreign Exchange market. Theories of Exchange Rate Determination- Mint Parity, PPP theory, Monetary Approach. Present International Monetary System. Balance of Payment and Balance of Trade – Definition, Disequilibrium and Adjustment Mechanism (Elementary Treatment). Exchange –Control. Multilateralism and WTO – Relevance for Developing Nations. IMF, World Bank. Foreign Trade Policy of India.

Books Recommended:

1. D. Salvatore : International Economics, John Wiley & Sons.
2. Bo Soderston and Geoffery Reed: International Economics, Palgrave Macmillan.
3. Rana and Verma: International Economics. (Hindi and English edition) Vishal Publishing House.
4. P. Krugman and M. Obstfeld: International Economics, Theory and Policy, Pearson Education.
5. P. T. Ellsworth and J. C. Leith : The International Economy, Macmillan.

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Min. Pass Marks

addition to these nine questions (3 questions from each section) there shall be one multiple choice/objective type question. This question shall be compulsory.

A candidate will be required to attempt five questions in all selecting at least one question from each section and one compulsory multiple choice/objective. Each question will carry 20 marks.

The multiple choice/objective type question will consist of 20 questions of one mark each.

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B. A. (Hons) Part – II

Paper VIII: Statistics for Economics

Section – A

Nature and Uses of Statistics; Techniques of Data Collection: Sample and Census Method; Primary and Secondary Data; Graphical and Diagrammatical Representation of Data; Measures of Central Tendency: Mean, Median, Mode, Geometric Mean and Harmonic Mean; Measures of Dispersion and Skewness.

Section – B

Simple Correlation and Rank Correlation; Regression Analysis: Estimation of Regression Line in a Bivariate Distribution – Least Square Method and Interpretation of Regression Coefficients; Analysis of Time Series: Components, Determination of Trend by Moving Averages and Linear Trend Equation, Measurement of Seasonal Variations; Index Numbers.

Section – C

Interpolation: Binomial Expansion and Newton's Method; Probability: Concept, Rules of Probability (Addition and Multiplication): Mathematical Expectation; Theoretical Distribution: Binomial, Poisson and Normal- Properties and Uses; Sampling Methods, Hypothesis Testing; Association of Attributes; X^2 (Chi -Square Test) and t – Test.

Note: Use of Non-Programmable Calculator is Permitted.

Books Recommended:

1. S. P. Gupta: Statistical Method. S. C. Chand and Son's
2. Kailash Nath Nagar : L. Sankhyiki ke Mool Tatva, Meenakshi Prakashan, Meerut.
3. D. R. Agarwal, Quantitative Methods. Vrienda Publication.
4. Statistical Methods: Schaum's Series McGraw Hill.

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12. MATHEMATICS

B.A./B.Sc. (Hons) Part-II-~~2008~~ onwards

Teaching : 3 Hours Per week per Theory paper.
2 Hours Per Week per Batch for Practical
(20 candidates in each batch)

Examination :

	Min.Pass Marks		Max. Marks
Scheme :	Science—160		400
		Duration	Max.Marks
Paper—V	Real Analysis and Metric Space	3 hrs.	100
Paper—VI	Differential Equations	3 hrs.	100
Paper—VII	Numerical Analysis and Vector Calculus	Theory : 2½ hrs.	68
		Practical : 2hrs.	32
Paper-VIII	Operation Research	3 hrs.	100

Note :

1. Papers V, VI and VIII will be divided into Five Units. Two questions will be set from each Unit. Candidates are required to attempt Five questions in all taking One question from each Unit. All question carry equal marks.
2. Paper VII is divided into Four Units. Two questions will be set from each Unit. Candidates are required to attempt four questions in all taking one questions from each Unit. All questions carry equal marks.
3. Common paper will be set for both the Faculties of Social Science and Science. However, the marks obtained by the candidate in the case of Faculty of Social Science will be covered according to the ratio of the maximum marks of the papers in the two Faculties.
4. Each candidate is required to appear in the Practical examination to be conducted by internal and external examiners. External examiner will be appointed by the University and internal examiner will be appointed by the Principal in consultation with Local Head/Head, Department of Mathematics in the college.
5. An Internal/external examiner can conduct Practical Examination not more than 100 (Hundred) candidates (20 Candidates in one batch).

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6. Each candidate has to pass in Theory and Practical examinations separately.

Paper-V : Real Analysis and Metric Space

Teaching : 3 Hours per Week

Duration of Examination : 3 Hours

Max. Marks : 100

Note : This paper is divided into Five Units. Two questions will be set from each Unit. Candidates are required to attempt Five questions in all taking One question from each Unit. All questions carry equal marks.

- Unit 1:** Real numbers as complete ordered field, Limit point, Bolzano-Weierstrass theorem. Closed and Open sets, Union and Intersection of such sets. Concept of compactness. Heine-Borel theorem. Connected sets.
Real sequences-Limit and Convergence of a sequence, Monotonic sequences.
- Unit 2:** Cauchy's sequences, Subsequences, Cauchy's general principle of convergence. Properties of continuous functions on closed intervals. Properties of derivable functions Darboux's and Rolle's theorem.
- Unit 3:** Notion of limit and continuity for functions of two variables. Riemann integration - Lower and Upper Riemann integrals, Riemann integrability, Meanvalue theorem of integral calculus, Fundamental theorem of integral calculus,
- Unit 4:** Sequence and series of functions - Pointwise and Uniform convergence, Cauchy's criterion, Weierstrass M-test, Abel's test, Dirichlet's test for uniform convergence of series of functions, Uniform convergence and Continuity of series of functions, Term by term differentiation and integration.
Metric space - Definition and examples, Open and closed sets, Interior and Closure of a set, limit point of a set.
- Unit 5:** Subspace of a metric space, Product space, Continuous mappings, Sequence in a metric space, Cauchy sequence. Complete metric space, Baire's theorem, Compact sets and Compact spaces, Connected metric spaces.

Paper-VI : Differential Equations

Teaching : 3 Hours per Week


Duration of Examination : 3 Hours

Max. Marks : 100

Note : This paper is divided into Five Units. Two questions will be

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- set from each Unit. Candidates are required to attempt Five questions in all taking One question from each Unit. All questions carry equal marks.
- Unit 1: Degree and order of a differential equation. Equations of first order and first degree. Equations in which the variables are separable. Homogeneous equations and equations reducible to homogeneous form. Linear equations and equations reducible to linear form. Exact differential equations and equations which can be made exact.
- Unit 2: First order but higher degree differential equations solvable for x,y and p. Clairaut's form and singular solutions with Extraneous Loci. Linear differential equations with constant coefficients, Complimentary function and Particular integral.
- Unit 3: Homogeneous linear differential equations, Simultaneous differential equations. Exact linear differential equations of nth order. Existence and uniqueness theorem.
- Unit 4: Linear differential equations of second order. Linear independence of solutions. Solution by transformation of the equation by changing the dependent variable/ the independent variable, Factorization of operators, Method of variation of parameters, Method of undetermined coefficients.
- Unit 5: Partial differential equations of the first order, Lagrange linear equation. Charpit's general method of solution. Homogeneous and non-Homogeneous linear partial differential equations with constant coefficients. Equations reducible to equations with constant coefficients.

Paper-VII : Numerical Analysis and Vector Calculus

Teaching : 3 Hours per Week

Duration of Examination : 2½ Hours

Max. Marks : 68

Note : (i) This paper is divided into Four Units. Two questions will be set from each Unit. Candidates are required to attempt Four questions in all taking One question from each Unit. All questions carry equal marks.

(ii) Non-Programmable Scientific Calculators are allowed.

Unit 1: Differences, Relation between differences and derivatives. Differences of a polynomial. Newton's formulae for forward and backward interpolation. Divided differences. Newton's divided difference, Interpolation formula. Lagrange's interpolation formula.

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Unit 2: Central differences. Gauss's, Stirling's and Bessel's interpolation formulae. Numerical Differentiation. Derivatives from interpolation formulae. Numerical integration, Newton-Cote's formula, Trapezoidal rule, Simpson's one-third, Simpson's three-eighth and Gauss's quadrature formulae.

Unit 3: Numerical solution of algebraic and transcendental equations. Bisection method. Ragula-Falsi method, Method of iteration, Newton-Raphson method. Gauss elimination and Iterative methods, (Jacobi and Gauss Seidal) for solving system of linear algebraic simultaneous equations. Solutions of ordinary differential equations of first order with initial and boundary conditions using Picard's and modified Euler's method.

Unit 4: Scalar point function. Vector point function. Differentiation and integration of vector point functions. Directional derivative. Differential operators. Gradient, Divergence and Curl. Theorems of Gauss, Green, Stokes (without proof) and problems based on these theorems.

Practical

**Teaching : 2 Hours per Week Per Batch
(20 Candidates in each Batch)**

Examination :

Duration : 2 Hours

Scheme

Max. Marks 32

Min. Pass Marks 13

Distribution of Marks :

Two Practicals one from each group

10 Marks each = 20 Marks

Practical Record = 06 Marks

Viva-voce = 06 Marks

Total Marks = 32 Marks

Group A : Numerical integration using Trapezoidal rule, Simpson's rules. Numerical solution of Algebraic and Transcendental equations using method of iteration and Newton's raphson Method.

Group B : Numerical solution of the system of linear equations. Solution of linear differential equations of first order and first degree with initial and boundary conditions using Picard's and modified Euler's method.

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Note :

1. Problems will be solved by using Scientific Calculators (non-Programmable)
2. Candidates must know about all functions and operations of Scientific Calculator.
3. Each Candidate (Regular/non-Collegiate) has to prepare his/her practical record.
4. Each Candidate has to pass in Practical and Theory examinations separately.

Paper-VIII : Operation Research

Teaching : 3 Hours per Week

Duration of Examination : 3 Hours

Max. Marks : 100

Note : This paper is divided into Five Units. Two questions will be set from each Unit. Candidates are required to attempt Five questions in all taking One question from each Unit. All questions carry equal marks.

Unit 1: Assignment models — Mathematical formulation, Hungarian method, Variations of the assignment problem, Travelling-salesman problem.

Transportation models — Mathematical formulation. Initial basic feasible solution.

Transportation algorithm for minimization problem. Degeneracy and unbalanced transportation problems.

Unit 2: Theory of Games—Introduction, Basic definitions, Minimax (Maximin) criterion and Optimal strategy. Saddle point, Minimax-Maximin principle for mixed strategy games, Fundamental theorem of Game theory. Two-by-two games without saddle point. Arithmetic method for 2×2 games. Graphical method for 2×2 games.

Unit 3: Inventory Models—Definition, Types of inventory models, Classification of inventory models, Economic Ordering Quantity (EOQ), EOQ models without shortage, EOQ models with shortage, EOQ models with constraints.

Unit 4: Probability theory—Probability distributions of a random variable, Standard deviation, Variance. Mathematical expectation, Binomial, Poisson and Normal distributions.

Unit 5: Queueing Theory—Introduction, Probability distributions in queueing systems. Models-Erlang model. General Erlang model, Model III (M/M/1) : (N/FCFS).

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13. GEOGRAPHY (HONS.)

Scheme :

Min. Pass Marks : 160 (40%)

Max. Marks : 400

Papers	Duration	Max. Marks
Paper-V Introduction to Political Geography	3 hrs.	80
Paper-VI Geography of Rajasthan	3 hrs.	80
Paper-VII Biogeography	3 hrs.	80
Paper-VIII Statistical Methods in Geography	3 hrs.	80
Practical		80

Note :

- Q.1. In all papers will be compulsory and will cover the entire course contents of the paper.
- One question (Q.No. 1) of 20% marks of the total marks be set in two parts.
 - (a) Q. on map (to be supplied) of 10% marks.
 - (b) Q. objective type (Multiple choice and very short answer) of 10% marks.
2. Nine questions will be set with three questions from each section.
3. The candidates will attempt five questions selecting at least one from each section.
4. For practical paper each student will attend a socio-economic survey camp and write a report. The report should be supported by maps and diagrams.
5. The students will have to pass separately in theory and practical.
6. Annual Theory examination will be of 3 hours duration.

Paper-V : Introduction To Political Geography**Section-A**

Nature, scope and significance of Political Geography, Political Geography and Geopolitics.

Approaches to the study of Political Geography : Morphological and functional.

Role of Physical, demographic, economic and socio-cultural factors in Political Geography.

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Section-B

State as a politico-territorial Phenomenon. The changing value of location, size and shape in the Political Geography of states.

Organisation of Government over the national territory-unitary and federal

Boundaries and frontiers : function and classification of international, federal

Section-C

Global Strategic Views : The views of Mackinder, Spykman, of Severson, Mahan and the Unified Field Theory of New Zones. Underdevelopment and international policies, the North-South dialogue and new international economic order.

International tensions—identification of tension areas and factors contributing to tension in different areas with special reference to West Asia and the Indian Ocean Region. Regional and international relations.

Recommended Books :

1. Diksha R.D. : Political Geography — A Contemporary Perspective. Tata McGraw-Hill Publishing Co. New Delhi.
2. Bhagwati, J.N. (ed.) : New International Economic Order— The North-South Debate, M. T. Press, London, 1976.
3. Prescott, J.R.V. : Political Geography. Methuen & Co. London, 1972.
4. Taylor, Peter : Political Geography, Longman, London.
5. Short, J.R. : An Introduction to Political Geography. Routledge & Kegan Paul, London, 1982.

Reference Books :

1. Taylor, Peter : Political Geography : Recent Advances and Future Directions. Barne and Noble Books, Totwa, J.N., 1984.
2. De Blij, Harms, J. : Systematic Political Geography. John Wiley & Sons Inc. New York, Latest Edition.
3. Muir, R. : Modern Political Geography, McMillan, London, 1981.

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Paper-VI : Geography of Rajasthan

Scheme :

Min. Pass Marks : 160 (40%)

Max. Marks : 400

Papers		Duration	Max. Marks
Paper-V	Introduction to Political Geography	3 hrs.	80
Paper-VI	Geography of Rajasthan	3 hrs.	80
Paper-VII	Biogeography	3 hrs.	80
Paper-VIII	Statistical Methods in Geography	3 hrs.	80
Practical			80

Note :

Q.1. in all papers will be compulsory and will cover the entire course contents of the paper.

One question (Q.No. 1) of 20% marks of the total marks be set in two parts.

(a) Q. on map (to be supplied) of 10% marks.

(b) Q. objective type (Multiple choice and very short answer) of 10% marks.

- Nine questions will be set with three questions from each section.
- The candidates will attempt five questions selecting at least one from each section.
- For practical paper each student will attend a socio-economic survey camp and writ a report. The report should be supported by maps and diagrams.
- The students will have to pass separately in theory and practical.
- Annual Theory examination will be of 3 hours duration.

Section-A

Location of Rajasthan and its position in India. Physical features and topography, geology, soil, drainage, vegetation, climate and climatic regions.

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Section-B

Agriculture—major crops, problems of agriculture, agricultural typology, wasteland and its problems. Agro climate regions. Irrigation—Sources of irrigation, major irrigation projects—Indira Gandhi Canal and the Chambal Command Area, Industries—Location of industries, major industries, small scale industries, minerals and their utilization.

Section-C

Regional Geography of Rajasthan. Geographical Regions—Desert region, East Rajasthan upland, Indira Gandhi Canal Command Region, The Chambal Command Area, Haudoti Region, Mewar Region, The Aravalli Region.

Recommended Books :

1. Mishra, V.C. (1976) : Geography of Rajasthan, National Books Trust, New Delhi.
2. Chaube, T.S. (1986) : Agricultural Geography of Rajasthan.
3. Dhabra, S.S. (1988) : Desert Spread and Desertification, Environmentalist, Jaipur.
4. Dhabra, S.S. (1988) : Ecocrises in the Aravalli Hill Region, Environmentalist, Jaipur.
5. Bhatia, R. (1989) : Rajasthan Ka Bhugol, Kuldeo Publications, Ajmer, Second Edition.
6. Sharma, A. (1984) : Agricultural Typology of Rajasthan.

Paper-VII : Introduction to Bio-Geography**Scheme :****Min. Pass Marks : 160 (40%)****Max. Marks : 400**

Papers	Duration	Max. Marks
Paper-V Introduction to Political Geography	3 hrs	80
Paper-VI Geography of Rajasthan	3 hrs	80
Paper-VII Biogeography	3 hrs	80
Paper-VIII Statistical Methods in Geography	3 hrs	80
Practical		80

Note :

Q.1. In all papers will be compulsory and will cover the entire course contents of the paper.

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One question (Q.No. 1) of 20% marks of the total marks be set in two parts.

- (a) Q. on map (to be supplied) of 10% marks.
 - (b) Q. objective type (Multiple choice and very short answer) of 10% marks.
2. Nine questions will be set with three questions from each section.
 3. The candidates will attempt five questions selecting at least one from each section.
 4. For practical paper each student will attend a socio-economic survey camp and write a report. The report should be supported by maps and diagrams.
 5. The students will have to pass separately in theory and practical.
 6. Annual Theory examination will be of 3 hours duration.

Section-A

Definition, scope and significance of Bio-Geography. Basic ecological principles : Bio-energy cycle in the terrestrial ecosystem and energy budget of the earth : Trophic levels and food chain : Darwin's theory of Evolution, concepts of Biome, Ecotone and Community.

Section-B

Origin of Fauna and flora : Geographical distribution, major gene-centres domestication of plants and animals and their dispersal. Distribution of plant life on the earth and its relation to soil types, climates and human practices.

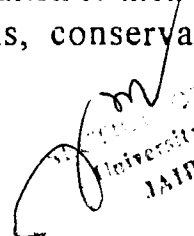
Geographical distribution of animal life on the earth and its relations to soil, vegetation types, climates and human practices.

Section-C

Problems of existence of some major plant and animal life. Habitat decay and their conservation. Process of desertification—its consequences and its management principles.

Industrial affluent and its effect on fresh water biology and marine biology management practice (Special reference to India). Study of two ecological regions of India in relation to their plant and animal life, their interrelations, problems, conservation and management measures.

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Recommended Books :

1. Robinson, H : Biogeography, ELBS, McDonald and Evans. London, 1982.
2. Simmons, I.G. : Biogeographical Processes, George Allen and Unwin, London.
3. Betts, C. : Biogeography-An Ecological and Evolutionary Approach, Cox Balkweel, Oxford, 1977.

Reference Books :

1. Seligson, B. : Biogeography, Duckworth, London, 1971.
2. Martin, C. : Plant Geography, Methuen, 1972.
3. Whittow, J. : Zoogeography - The Geographical Distribution of Animals, John Wiley, New York, 1957.

Paper VIII : Statistical Methods in Geography**Scheme**

Min. Pass Marks : 160 (40%)

Max. Marks : 400

Paper	Duration	Max. Marks
Paper I - Introduction to Political Geography	3 hrs.	80
Paper II - Geography of Rajasthan	3 hrs.	80
Paper III - Biogeography	3 hrs.	80
Paper IV - Statistical Methods in Geography	3 hrs.	80

Notes

1. In all papers will be compulsory and will cover the entire course contents of the paper.
 - One question (Q.No. 1) of 20% marks of the total marks be set in two parts.
 - (a) Q. on map (to be supplied) of 10% marks.
 - (b) Q. objective type (Multiple choice and very short answer) of 10% marks.
2. Nine questions will be set with three questions from each section.

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3. The candidates will attempt five questions selecting at least one from each section.
4. For practical paper each student will attend a socio-economic survey camp and write a report. The report should be supported by maps and diagrams.
5. The students will have to pass separately in theory and practical.
6. Annual Theory examination will be of 3 hours duration.

Section-A

Significance of the statistical techniques in geographic studies.
Data and its problems, Analysis of data.

Frequency distributions, Characteristics of frequency distribution : number of classes : class-interval.

Percentage frequencies : cumulative frequencies.

Types of frequency graphs histogram : frequency polygon : frequency curve.

Section-B

Measures of central tendency : means, median, mode, arithmetic mean and geometric mean.

Measure of variations of dispersion : crude range.

Quartile deviation : quartiles for grouped and ungrouped data; median and the quartile; standard deviation : Normal curve . Relative variation; measures of Skewness : Kurtosis.

Section-C

Theory of probability—Basic Principles : axioms probability : Probability distribution. Theory of sampling : types of sampling : random and systematic sampling : problems of application of sampling methods of Geography.

Reference Books :

1. Aslam, Mahmood—Statistical Methods in Geographical Studies. Rajesh Publications, Delhi, 1977.
2. Duncan, O.D. *et. al.*—Statistical Geography, (Problems in Analysing Areal Data), Free Press of Blenco, New York, 1961.
3. Gregory S—Statistical Methods and the Geographer, Longmans London, 1963.
4. King, L.J.—Statistical Analysis in Geography, Prentice Hall, Englewood Cliffs, NJ.
5. Lewis. Peter-Maps and Statistics, Methuen & Co. Ltd., London, 1977.

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6. Monkhouse, F.J. and H.R. Wilkinson Maps and Diagrams, Methuen & Co., London, 1967.
7. Norchife—Inferential Statistics for Geographers, B.I. Publications, Chennai, 1985.
8. Singh, R.L.—Elements of Practical Geography, Kalyani Publishers, New Delhi, 1979.
9. Yeates, Mauric, M.—An Introduction to Quntitative Analysis in Economic Geography, McGraw-Hill, New York, 1968.

Geography Practical

Scheme :

Min. Pass Marks : 32

Max. Marks : 80

Distribution of marks for purpose of examination

	Marks	Time
1. Written Test	30	3 hrs.
2. Field of Survey and viva	15 (10+5)	2½ hrs.
3. Socio-economic survey camp report and viva	15 (10+5)	2½ hrs.
4. Record and viva	20 (12+8)	

Course Contents : Representation of population, Economic and Commercial data on maps and diagrams—Point symbols (dots, circles, spheres), Line and area symbols (Isoplaths and choroplath. use of mean, Median, quartile and standard deviation in mapping use of line and bar graphs for representing trends in population, agricultural, industrial and transport data.

Plane table survey (intersection, traverse, resectioning, use of clinometer, meaning and interpretation of remote sensing.

Social-economic survey of a town/village within the state of Rajasthan. The report will be submitted at the time of practical examination.

Reference Books :

1. Monk House, F.J. : Mps and Diagrams, Methuen & Co., London. Latest Edition.
2. Robinson, A.H. and others : Elements of Cartography, John Wiley and Sons, New York. Latest Edition.
3. Singh, R.L. and Dutt, P.K. : Elements of Practical Geography, Students Friends, Allahabad.

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4. Mishra, R.P. Ramesh A. : Fundamentals of Cartography, Macmillan, New Delhi, 1986.
5. Mahmood, Aslam : Statistical Techniques in Geographical Studies, Rajesh Publishers, New Delhi.

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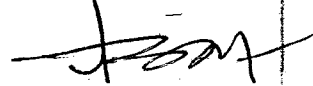
14. PSYCHOLOGY (HONS.)

Scheme :

<i>Four Theory Papers</i>	<i>Duration</i>	<i>Max. Marks</i>	<i>Min. Pass Marks</i>
Paper-V	3 hrs.	75	
Paper-VI	3 hrs.	75	120
Paper-VII	3 hrs.	75	
Paper-VIII	3 hrs.	75	
Practicals		100	40

Note: : There will be 4 theory papers in subject Psychology in BA Hons Part II. There will be common paper for Arts and Science Questions No. 1 will be compulsory and will cover the entire course contents of the paper. Questions I will contain two parts A & B. A part of I question will contain 20 questions of multiple choice. Each question will be of 3/4 mark. Thus A part will be of 15 marks. B part will contain 10 questions to be answered in the limit of 20 words. Each question of B part will be of 1½ marks. Thus B part will be of 15 marks. Separate question paper for this objective type will be provided to each student and answers will be given in this question paper only in the space provided for this purpose in the objective type question paper. Candidates will be given one hour to attempt this first compulsory question out of three hours in total time allotted for this paper.

In the second part of the question paper, three questions of essay type will be attempted selecting at least one from each section. Each question will be of 15 marks. This objective type question will be compulsory to attempt in all four theory papers.



B.A./ B.Sc. Honours Part-II

Paper-V Systems of Psychology

Section-A

1. **Psychology as a Science: Origin, Present Status, Introduction to Schools of Psychology.**
2. **Beginnings of Scientific Psychology: Wundt, Webar, Fechner, Helmholtz.**
3. **Structuralism**

Section-B

4. **Functionalism**
5. **Behaviourism**
6. **Gestalt Psychology**

Section-C

7. **Freudian Psychoanalysis**
8. **Neo-Freudians: Horney, Fromm and Sullivan**
9. **Dynamic Psychology: Woodworth and McDougal**

Reference Books:

1. Hergenhahr, B.R. (2001) An Introduction to the history (4th edition), New Delhi: Cengage Learning
2. Leahey T.H. (2006) History of Psychology: Main currents in psychological thoughts, New Delhi: Pearson Education.
3. Shultz D.P. (2003). History of psychology (4th Edition), New Delhi: Pearson Education
4. Singh, A.K. (1997), The Comprehensive history of psychology. New Delhi: Motilal Banarsi Das.

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Paper VI: Social Psychology

Section-A

1. **Introduction:** History of Social Psychology, Subject Matter of Social Psychology, Social Psychology as an Applied Science, Importance of Social Psychology.
2. **Social Cognition:** Schemas, Mental Frame Work for organizing Social Information, Heuristics and Automatic Processing, Potential Sources of Errors in Social Cognition, Affect and Cognition.
3. **Social Motivation and Attraction:** Meaning, Types of Social Motivation, Theory of Achievement Motivation, Inter-personal Attraction - Its meaning, determinants and Theories.

Section-B

4. **Social Attitude:** Development of Attitudes, Functions of Attitude, Attitude Change, Measurement of Attitude.
5. **Groups and Organisations:** Basic characteristics of group structure, Norms and ideology, Performance in group and individual situation, Cooperation and Conflict, Decision making in groups.
6. **Leadership:** Attributes of leadership, Origin of leadership, Functions, Type and Theories of leadership.

Section-C

7. **Prejudice and Stereotypes:** Meaning, Nature and Origin of prejudice, stereotypes – beliefs about social groups, reasons of forming and using Stereotypes, Techniques for countering Prejudice and Stereotypes.

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8. **Public Opinion and Propaganda: Meaning, Formation and measurement of Public Opinion, Propaganda – its Meaning, Nature and Principles, Effect of media on propaganda, propaganda as an Effective tool.**
9. **Social Tension and Social Change: Meaning, types and causes of social tensions, effect of social tensions, methods of reducing social tensions. Social change: Meaning, Characteristics and Agents of social change, Resistance to social change, Effects of social changes.**

Reference Books:

1. Baron, R.A. and Byrne, D. (2010). Social psychology (11th edition), New Delhi: Person education.
2. Mohammad, S. (2009). Ucchtar samaj manovigyan. New Delhi: Motilal Banarsi Das.
3. Myers, D. (2007). Social psychology. New Delhi: Cengage learning.
4. Singh, A.K. (2009). Samaj Manovigyan ke ruprekha. New Delhi: Motilal Banarsi Das.
5. Taylor, S.E. David, L.A. and Sears, O. (2009). Social psychology (12th Edition). New Delhi: Pearson education.

Paper VIII: Counselling Psychology

Section-A

1. **Counselling: The Art and Scheme of Helping**
 - (a) Meaning, purpose and goals of counselling with special reference to India
 - (b) Professional issues, ethics, education and training of the counsellor.

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2. **Counselling Process**
 - (a) Counselling relationship
 - (b) Counselling interviews

Section-B

3. **Theories and Techniques of Counselling**
 - (a) Psychodynamic Approach: Freudian, Neo-Freudian, Modern.
 - (b) Humanistic Approach: Existential, client centered.
4. **Theories and Techniques of Counselling**
 - (a) Cognitive Approach: Rational emotive, Transactional analysis.
 - (b) Behavioural Approach: Operant conditioning, Behaviour modification.
 - (c) Indian Contribution: Yoga and Meditation.

Section-C

5. **Counselling Applications**
Child Counselling, Family Counselling: Counselling in Schools. Career Counselling,
6. Alcohol and Drug Abuse, Group Counselling, Crisis Intervention Counselling.

Reference Books:

1. George, R.L. and Cristiani, T.S. (1994) Counselling Theory and Practice (IV Ed.) New Delhi: Prentice - Hall.
2. Gibson, R.L. and Mitchell, M.H. (2005). Introduction to Counselling and Guidance. New Delhi: Pearson education.
3. Gelso, C.G. and Fretz, B. (2003) Counselling Psychology; Practices, Issues and Interventions New Delhi: Cengage learning.

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4. Capuzzi's (2008). Counselling and Psychotherapy (4th Ed.). New Delhi: Pearson education.
5. Gladding, S. (2009). Counselling; A comprehensive profession. New Delhi: Pearson education.

VIII

Paper-~~IV~~: Biological Basis of Behaviour

Section-A

1. **Introduction:** Definition, Scope and methods of studying Biological basis of behaviour.
2. **Structure and Functions of Cells of Nervous system:** Neurons, communication within a neuron, communication between neurons.
3. **Structure and Functions of Nervous system:** Basic feature, CNS and PNS: Functions, Neurotransmitters.

Section-B

4. **Lateralization of Brain functions:** Difference between left and right hemispheres, cortical localization of language, Aphasia.
5. **Ingestive behaviour:** Physiological Regulatory mechanism, Eating, Brain mechanism in Eating disorders.
6. **Sleep and Waking:** Physiological mechanism of sleep and waking; Biological clock and sleep disorders.

Section-C

7. **Learning and Memory:** Nature of Learning, Neural mechanism of learning and memory, Disorders of Memory.

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