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CH.BALLURAM GODARA GOVT.GIRLS COLLEGE
Near Bhagat Singh Circle, Ravindra path, Sriganganagar-335001 (Rajasthan)

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List and description of the courses that address Professional Ethics, Human Values, Gender and Environment into Curriculum: -

Sr. No.	Course	Program	Description
1.	Environment Studies	BA/BSc / B. Com Part- I	Environmental Issues
2.	Elementary Computer	BA/ BSc/ B Com Part- I	Essential Computation skills for professional competence
3.	ABST	B.Com Part - III	Rules and procedures for the financial accounting rule with special focus on the rules of direct and indirect taxes Income Tax and GST
4.	Women's Writing	MA Final English	Core Values of feminism through an analysis of women's writings
5.	Sahityak Nibandh (Literacy Essay)	MA Final Hindi	Stri- Vimarsh (Feminist Discourse)
6.	Human Rights & Duties: Theory and practice	MA Final Political Science	Universal Declaration of Human Rights and Human Values
7.	Clinical Nutrition & Dietetics	B.Sc. Part/ MA Home Science	General Well- being and human health
8.	Geography of Environment Environment	M.A. Geography	Environment and Sustainability]
9.	Environmental Economics	M.A. Economics	Environment and Sustainability
10.	Ecology and Phytogeography	B.Sc. Botany	Ecology and Biodiversity


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100

Syllabi of the courses that address cross-cutting issues relevant to Professional ethics, Gender, Human Values, Environment and sustainability

ENVIRONMENTAL STUDIES

Theory : Max. Marks: 100 Min. Passing Marks: 36

Note.

1. The marks secured in this paper shall not be counted in awarding the division to a candidate.
2. The candidate have to clear compulsory paper in three years.
3. Non appearing or absent in the examination of compulsory paper will be counted a chance.

The syllables and scheme of examination is as under:

Compulsory in 1st year for all streams at undergraduate level

SCHEME OF EXAMINATION

1. The paper will be of 100 marks.
2. There will be no practical/Field work, instead student should be aware of ecology of local area; the question related to field work of local area can be asked by paper setter.
3. There will be 100 questions in the paper of multiple choice, each question of 1 mark.
4. There will be no negative marking in the assessment.

Core Module syllabus for Environmental Studies for Under Graduate Courses of All Branches of Higher Education

Unit-1 : The multidisciplinary nature of environmental studies.

- Definition scope and awareness.
- Need for public awareness.

3. Non-Scientific Calculator is allowed to be used in examination.

Introduction to Information Technology, Generation of Computers, Types of computers: Micro, Mini, Mainframe, Super.

Architecture of Computer System: CPU, Primary Memory: RAM, ROM, Cache memory, Secondary memories, Input/output devices, Pointing device.

Number System and their conversions: Binary, Octal, Decimal, Hexadecimal. Logic gates. Languages: Machine, assembly and High Level Languages including 3GL, 4GL.

Concept of Operating System, Need and Types of Operating System: Batch, Single User, Multiprocessing, Time Sharing. Introduction to Windows.

Internet: Concept, e-mail services, WWW, Web Browsers, Search Engines, Simple programs in HTML, type of HTML Documents, Document Structures: Element, type and Character Formatting, Tables, Frames, Forms, Style Sheets.

Computer Networking: Type of networks, LAN, MAN and WAN, Concept of topology, Bridges, Routers, Gateways, Modem, ISDN Leased lines, teleconferencing and videoconferencing.

E-Commerce: Concept of E-Commerce, benefits and growth of E-Commerce, E-Commerce categories, E-Governance, EDI, Electronic Funds transfer on EDI networks, Electronic Payment System.

References:

1. Computer Fundamentals By P.K. Sinha (BPB Publications)
2. Computer made Easy for Beginners(in Hindi) By Niranjana Bansal, Jayshri Saragoi
3. IT Tools and Application by Satish Jain, Shashank Jain, Dr. Madulika Jain(BPB Publication)
4. Rapidex Computer Course By Vikas Gupta(PustakMahal)
5. Internet and Web page Designing By V.K. Jain(BPB Publications)
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ENVIRONMENTAL STUDIES

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4. There will be no negative marking in the assessment.

Core Module syllabus for Environmental Studies for Under Graduate Courses of All Branches of Higher Education

Unit-1 : The multidisciplinary nature of environmental studies.

- Definition scope and awareness.
- Need for public awareness.

Unit-2 : Natural Resources :

- Renewable and non-renewable resources
- Natural resources and associated problems.
- Forest resources.
- Use and over-exploitation.
- Deforestation.
- Timber exploitation.
- Mining
- Dams and their effects on forests and tribal people.
- Water resources.
- Use and over utilization of surface and ground water.
- Floods
- Drought
- Conflicts over water
- Dams benefits and problems.
- Mineral resources.
- Use and exploitation.
- Environmental effects of extracting and using mineral resources.
- Food resources.
- World food problems.
- Changes caused by agriculture and overgrazing.
- Effects of modern agriculture.
- Fertilizer, pesticide problems.
- Water logging.
- Salinity

Energy resources :

- Growing energy needs.
- Renewable and non-renewable energy resources.
- Use of alternate energy resources.

Land resources :

- Land as a resource.
- Land degradation.
- Man induced land slides.
- Soil erosion & desertification.

Role of an individual in conservation of natural resources. Equitable use of resources for sustainable system.

Unit-3 : Ecosystem:

- Concept of an ecosystem.
- Structure and function of an ecosystem.
- Producers, consumers and decomposers.
- Energy flow in the ecosystem.
- Ecological succession.
- Food chains, food webs and ecological pyramids.
- Introduction types, characteristic features, structure and function of the following ecosystems.

- Forest ecosystem.
- Grassland ecosystem
- Desert ecosystem.
- Aquatic ecosystems (ponds, streams, lakes, rivers, oceans estuaries).

Unit-4 : Biodiversity and its conservation:

- Introduction, definition and diversity at genetic, species and ecosystem level.
- Biogeographically classification of India.
- Value of biodiversity, consumptive use productive use, social, ethical, aesthetic and option values.
- Biodiversity at global, national & local levels.
- India as a mega-diversity nation.
- Hot-spots of biodiversity.
- Threats to biodiversity - habitat loss poaching of wild life, man-wild life conflicts.
- Endangered and endemic species of India.
- Conservation of biodiversity – In situ and Ex-situ conservation of biodiversity.

Unit-5 : Environmental Pollution :

- Definition, causes, effect and control measures of
- Air pollution.
- Water pollution
- Soil pollution.
- Marine pollution
- Noise pollution
- Thermal pollution
- Nuclear hazards.
- Solid waste management : Causes, effects and control measures of urban industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster management : Flood, earthquake, cyclone and land slides.

Unit-6 : Social issues and the environment :

- From unsustainable to sustainable development
- Urban problems related to energy.
- Water conservation, rain water harvesting, water shed management.
- Settlement and rehabilitation of people, its problem of concerns.
- Environmental ethics-issues and possible solutions. Ozone layer depletion, nuclear accidents.
- Wasteland reclamation.
- Consumerism and waste products.
- Environmental protection Act.
- i. Air () prevention and control of pollution Act
- ii. Wild life protection Act
- iii. Forest conservation Act.
- Issues involved in enforcement of environmental legislation.

- Public awareness.

Unit-7 : Human Population and the Environment :

- Population growth, variation among nations.
- Population explosion-Family welfare programme.
- Environment and Human health.
- Human rights.
- Value education.
- HIV/AIDS
- Women & child welfare.
- Role of information technology in environment and human health.

FIELD WORK

- Visit to a local area to document environmental assets-river/forest/grassland/ hill/ mountain.
- Visit to local polluted site- Urban/rural/industrial/agricultural.
- Study of common plants, insects. Birds.
- Study of simple ecosystem-Pond, river, hill slope etc.

Suggested Books :

- 1 पर्यावरण अध्ययन – वर्मा, गैना, खण्डेलवाल, रावत
- 2 पर्यावरण विज्ञान – पी.सी. त्रिवेदी, गरिमा गुप्ता
- 3 पर्यावरण अध्ययन – सुरेश आमेता, शिप्रा भारद्वाज
- 4 Environmental studies -Pratap Singh, N.S. Rathore, A.N. Mathur
- 5 पर्यावरण अध्ययन – बाकरे, बाकरे वाधवा
- 6 पर्यावरण अध्ययन – मनोज यादव, अनूपमा यादव

Suggested Readings:

Murphy, Raymond: *Intermediate English Grammar* (OUP)

Huddleston, Rodney: *English Grammar: An Outline* (OUP)

Greenbaum, Sidney: *The Oxford English Grammar* (OUP)

Elementary Computer Applications

Examination 2021

Max. Marks : 100

Min . Passing Marks : 36

Time : 2 Hours

Note:

1. Passing in theory examination shall be necessary by securing at least 36% marks.
2. The theory paper shall consist of 100 objective type questions. Each will carry 1 marks. Candidate will have to write correct answer (A) or (B) or (C) or (D) in space provided against the questions on OMR sheet.
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Unit-1 : The multidisciplinary nature of environmental studies.

- Definition scope and awareness.

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BCOM II YEAR - 2023
ACCOUNTANCY AND BUSINESS STATISTICS
PAPER – I : TAXATION-INCOME TAX LAW & ACCOUNTS

Unit - I

Introduction and definitions, Residential Status and incidence of tax, computation of taxable income under the head salary.

Unit - II

Computation of taxable income under the heads : income from house property, income from business or profession.

Unit - III

Computation of income from capital gains, Income from other sources, Aggregation and clubbing of income, set off and carry forward of losses, Exempted incomes.

Unit - IV

Deductions from Gross Total income, Computation of total income and tax liability of individuals, Computation of total income and tax liability of Hindu Undivided family.

Unit - V

Computation of total income and tax liability of partnership firms assessed as such and assessed as Association of Persons. Provisions regarding deduction of tax at source and Advance payment of tax. Assessment procedure.

Note : The act and Rules which are relevant for the assessment year beginning from 1st April immediately preceding the date of commencement of the Academic Session.


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PAPER – II : TAXATION AND AUDITING

Note : In this question paper 10 questions will be set. 2 questions form each unit. Candidates are required to attempt five questions in all selecting one question from each unit.

Unit - I

CGST/SGST: Important term and definitions under central goods and service Tax Act, 2017 and state goods and service Tax Act, 2017. Basic of GST, meaning and scope of supply, levy and collection of tax.

Unit - II

CGST/SGST: Time and value of supply of goods and /or service. Input Tax credit, transitional provisions. Registration under CGST/SGST Act, filling of returns and assessment, payment of tax including payment of tax on reverse charge basis. Refund under the Act.

Unit - III

CGST/SGST: Maintenance of Account and Records. Composition Scheme, Job work and its procedure, Various Exemptions under GST, Demand and recovery under GST, Miscellaneous provisions under GST.

Unit - IV

IGST: Scope of integrated goods and service tax (IGST), important term and definitions under IGST Act, 2017, levy and collection of IGST, principles for determining the place of supply of goods and services zero rated supply.

Unit – V

Auditing : Meaning and objectives of auditing, importance and limitations of auditing. Internal control, vouching, verification of assets and liabilities, company audit.


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* Detailed Study

Evaluation Scheme

There shall be a Terminal Examination of 100 Marks at the end of every Session. The Examination Paper shall consist of Three Sections.

Section 'A' shall comprise Ten questions (all compulsory, to be answered in 50 words each) of 2 Marks each. The Examiner shall set questions on this section choosing at least two from each unit.

Section 'B' shall comprise Two Parts:

Part I shall consist of Three Reference to Context Questions from starred texts, out of which the candidate shall attempt any two (to be answered in 200 Words each). Each Question shall carry 08 Marks.

Part II shall comprise Four Questions, out of which the candidate shall attempt any three (to be answered in 200 Words each). Each Question

shall carry 08 Marks. The Examiner shall set Questions in such a way so that almost the cent percent coverage of the syllabus is ensured. Section C shall comprise Four Questions (to be answered in 500 Words each) out of which the Candidate shall attempt any two. Each Question shall carry 20 Marks. The Examiner shall set Questions in such a way so that almost the cent percent coverage of the syllabus is ensured.

Or

Paper-VIII (B) Women's Writing

Examination Paper Pattern at Postgraduate Level :

World Limit	Total Quest.	No. of Quest. to be solved	Allocation of Marks (que. wise)	Max. Marks (100)	Selection of question (for paper setter)
50	10	10	02	20	At least 2 question from each unit
200	07	05	08	40	At least 1 question from each unit
500	04	02	20	40	Not more than question from each unit
-	-	-	-	100	

Unit-I

- * Devotional Songs of Meera Bai : In Praise of Lord 1,2,3,4&5 (A.J. Atson, Delhi: Motilal Das Publishers)
- * Margaret Atwood : Siren Song, For Archeologists, Three Desk Objects, Carrying

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- Food Home in Winter
Adrienne Rich : Snapshots of a Daughter
-in - Law
- Unit-II
* UA Fanthorpe : Not My Best Side
* Gwendolyn Brooks: A Sunset of the City,
The Children of the
Poor, A Light and Diplomatic Bird
- * Sylvia Plath : Lady Lazarus,
Daddy, Tulips
- Unit-III
Toni Morrison : Beloved
Mary Wollstonecraft : A Vindication of the Rights of Women
Chapter 1&2
- Unit-IV
Caryl Churchill : Top Girls
Susan Glaspell : Trifles
- Unit-V
Shashi Deshpande : That Long Silence Virginia
Woolf : A Room of One's Own
- * Detailed Study

Evaluation Scheme

There shall be a Terminal Examination of 100 Marks at the end of every Session.
The Examination Paper shall consist of Three Sections:

Section 'A' shall comprise Ten questions (all compulsory, to be answered in 50 words each) of 2 Marks each. The Examiner shall set questions on this section choosing at least two from each unit.

Section 'B' shall comprise Two Parts:

Part I shall consist of Three Reference to Context Questions from starred texts, out of which the candidate shall attempt any two (to be answered in 200 Words each). Each Question shall carry 08 Marks.

Part II shall comprise Four Questions, out of which the candidate shall attempt any three (to be answered in 200 Words each). Each Question shall carry 08 Marks. The Examiner shall set Questions in such a way so that almost the cent percent coverage of the syllabus is ensured. Section C shall comprise Four Questions (to be answered in 500 Words each) out of which the Candidate shall attempt any two. Each Question shall carry 20 Marks. The Examiner shall set Questions in such a way so that almost the cent percent coverage of the syllabus is ensured.

Or

Paper-VIII (C) English Language and Culture
Examination Paper Pattern at Postgraduate Level :

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समय : 3 घंटे

उत्तीर्णांक : 36

पूर्णांक : 100

इकाई-1

प्रिय लेखक – 20 अंक (सीमा –2000 शब्द)

इकाई-2

साहित्य सिद्धान्त और विमर्श – यथार्थवाद, अतियथार्थवाद, स्वच्छंदतावाद, जनवादी विचार, रूपवाद, कलावाद, मार्क्सवाद, मनोविश्लेषणवाद, स्त्रीविमर्श, दलित विमर्श, आदिवासी विमर्श, विकलांग विमर्श, आदि – 20 अंक (सीमा –2000 शब्द)

इकाई-3

काव्य आन्दोलन – प्रयोगवाद, नई कविता, साठोत्तरी कविता, गीत, नवगीत एवं प्रमुख आन्दोलनों का विश्लेषणात्मक अध्ययन – 20 अंक (सीमा –2000 शब्द)

इकाई-4

राजस्थान का हिन्दी साहित्य –

कहानी, उपन्यास, नाटक, आलोचना एवं अन्य विधाएं – 20 अंक (सीमा –2000 शब्द)

इकाई-5

लोक साहित्य, संस्कृति एवं समाज –

लोक कथा, लोक नाट्य, वात साहित्य, लोक गीत, लोक नृत्य, लोक संगीत, लोक परम्पराएं – 20 अंक (सीमा –2000 शब्द)

परीक्षकों के लिए निर्देश :-

1. प्रश्न-पत्र 5 इकाइयों में विभक्त है।
2. प्रत्येक क्षेत्र इकाई से 2 निबन्धात्मक प्रश्न पूछे जाएंगे, जिसमें से विद्यार्थी को 1 प्रश्न अनिवार्य रूप से हल करना होगा।
3. सभी प्रश्नों की शब्द-सीमा 2000 शब्द प्रति प्रश्न होगा।

16. Owen M. Lych : The Politics of Untouchability
17. Myron Weiner : Party Politics in India
18. E. Eulau (Ed.) : Political behavior
19. W. Kornhauser : Politics of Mass Society
20. Marion J. Levy : Modernization and the structured societies
21. H. Hyman : Political socialization and Political Development
22. D. Lerner : The Passing of Traditional society
23. L.T. Rudolph and Sussan Rudolph : The Modernity of Tradition

ONE PAPER IS TO BE OFFERED FROM THE FOLLOWING PAPERS

Paper IX Either

(i) HUMAN RIGHTS AND DUTIES : THEORIES AND PRACTICE

Note : The question paper shall contain three sections. **Section-A** shall contain 10 questions, two from each unit of 2 marks each. The candidate is required to answer all the questions. The answers should not exceed 50 words. **Section-B** shall contain 5 questions, one from each unit with internal choice. Each question shall be of 7 marks. The answers should not exceed 200 words. The candidate is required to answer all the questions. **Section-C** shall contain 5 questions of 15 marks each, one from each unit. The candidate is required to answer any three questions. The answer shall not exceed 500 words.

Unit-I

Meaning and Nature of Human Rights and Duties; Basic concepts: Individual, Group, State, Civil Society, Liberty, Equality, Justice and Violence; Human Values : Humanity, Compassion and Virtues.

Unit-II

Human Rights and Duties : Origin and Evolution. Natural, Civil, and Political Rights; Individual vis-a-vis Society and State. The Contribution of Magna Carta, American Bill of Rights; The French Revolution and its Goals; Marxist Revolution and Freedom Movements with special reference to India.

Universal Declaration of Human Rights (1948): International conventions and Declaration Relating to specific Groups (Women, Child, Minorities, Refugees) and Rights (Religious Freedom, Torture, Development, Sexual and Racial Discrimination).

Unit-III

International Covenant on Civil and Political Rights; International Covenant on Economic, Social and Cultural Rights.

UN Organs - UN Commission on Human Rights, UN Children Fund, UN Commission on the Status of Refugees (UNCHR), UN Commission on the Status of Women, International Labour Organisation, UN Educational, Scientific and Cultural Organisation (UNESCO); Universal Human Rights : Changing World Order.

Unit-IV

Human Rights and Duties in India :

Constitutional Vision of Freedom (Fundamental Rights), Constitutional Vision of Justice (Directive Principles of State Policy); Constitution and Duties. Judicial Activism and Public Interest Litigation; Legislation for Weaker Sections and Enforcement.

Unit-V

Human Rights; Issues in Enforcement and Trends: National Human Rights Commission; State Human Rights Commission;

NGOs and Human Rights Movement: Amnesty International, Asia Watch, People's Union for Civil Liberties (PUCE) and People's Union for Democratic Rights (PUDR). Globalization and Human Rights: New Social Movement, Democratic Struggle and Human Rights; the Problem of the Rights to Development - the Problem of the Rights to Life and Needs and Clean Environment.

Need for Spelling Out Human Duties and Eternal Human Values.

Suggested Books :

1. Basu : Human Rights in Constitutional Law, Prens
2. Begum Dr. S.Meharaty : Human Rights in India - Issues and Perspectives
3. Denjeli Yael, Elsa Stamatopoulon and Clarenaca J. Dias (Editor) : The Universal Declaration of Human Rights - Fifty Years and Beyond .
4. Jaswal, P.S. : Human Right and the Law
5. Johari, J.C. : Human Rights and New world order : Towards perfection of the Democratic way of Life
6. Kaushik, V. : Women's Movements and Human Rights
7. Nirmal, Chiranjive J. : Human Rights in India: Historical, Social and Political Perspective

2. Journal of Rural Development. The National Institute of Rural Development Rajendernagar, Hyderabad - 500029.
3. Social Welfare, Control Social Welfare Board, Samaj Kalyan Bhavan, B-12, Tona Crescent, Institutional Area. South of IIT & New Delhi-110016.
4. Kurkshetra, Director, Publication, Division, Ministry of I and B, Government of India, Patiala, Patiala House, New Delhi -110001.
5. Yojana, Director, Publications, Division, Patiala House, New Delhi 110001.
6. Indian Journal of Extension Education. The Indian Societies of Extension Education, Division of Agricultural Extension I.A.R.I., New Delhi, 110012.

Paper XVIII - FOODS AND NUTRITION - IV

Nutrition Management in Health and Disease

Periods./ Week: 4

Max. Marks: 50

Duration of Exam: 3 hrs.

Min. Marks: 18

Note:-

The question paper shall contain three sections. **Section A** contains 5 questions one from each unit of 2 marks each. The candidate is required to answer all the questions. The answers should not exceed 50 words. **Section B** shall contain 5 questions one from each unit with internal choice. Each question shall be of 4 marks. The answers should not exceed 200 words. The candidate is required to answer any 4 questions. **Section C** shall contain 5 questions of 8 marks each, one from each unit. The candidate is required to answer 3 questions. The answer shall not exceed 350 words.

Objectives : This course will enable the student to

1. Understand the concept of an adequate diet and the importance of meal planning.
2. Know the factors affecting the nutrient needs and RDA during life cycle and learn Dietary Management for various age groups.
3. Gain knowledge about dietary management in common ailments.

Contents :

UNIT I

1. Meal management - Concept and definition-resources, goals and values in meal management. Factors to be considered while planning diet.

(a) Nutritional Adequacy - planning of nutritionally balanced diet.

(b) Food cost and economy - matching meals to family income. Characteristics of meals for low, moderate and liberal cost, food budgets, economizing in meal management.

(c) Matching meals to available time and energy.

(d) Acceptability of meals-

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II) Malabsorption Syndrome- Celiac Sprue and Tropical Sprue.

c) Hepatitis, cirrhosis of liver, cholecystitis

UNIT V

d) Diabetes mellitus

e) Hypertension, atherosclerosis

f) Glomerulonephritis- acute and chronic.

g) Inborn Errors of Metabolism- Phenyl Ketone urea and Maple Syrup Urine disease.

h) Gout.

6. Interaction between Immunity, Nutrition and Infection.

PRACTICAL

Periods./ Week:4

Max. Marks: 40

Duration of Exam: 3 hrs.

Min. Marks: 15

Objectives-

This course will enable the students to

1. Plan and prepare nutritionally adequate diet in relation to age, activity levels physiological state and socio economic status.

2. Make therapeutic modification of normal diet for common disease condition **Contents-**

1. Market survey for availability and cost of foods.

2. Calculations and weighing of portions of foods containing same level of a nutrient - energy protein, retinal or its equivalent, thiamine, riboflavin, niacin, ascorbic acid, iron and calcium.

3. Finding out the cheaper sources of nutrients, calculating how much of the nutrient a rupee can buy from different sources.

4. Food exchanges for energy, protein, fats and carbohydrates.

5. Food presentation and table setting.

6. Planning and preparation of diets for different age groups at different socioeconomic and activity levels in relation to special nutrient requirements. a) Adult b) Pregnancy c) Lactation d) Infancy e) Preschool child

7. Planning and preparing modified diets

a) Soft b) Fluid c) Bland d) High protein e) Calorie restricted

8. Planning and preparing modified diets for

a) Fever b) Diarrhoea c) Constipation d) Hepatitis e) Hypertension f) Atherosclerosis g) Diabetes mellitus h) Glomerulonephritis i) Obesity

9. Planning and preparing low cost nutrient rich dishes.

Distribution of Marks

i. Files, Records etc.

10 marks

ii. Planning

(a) Diet

04 marks

(b) Menu for a given occasion

03 marks

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etc.

(ii) Physiological satisfaction- hunger, appetite and satiety value.

(iii) Likes and dislikes.

(iv) Other factors- availability, variety, food habits, tradition, culture, religion, food fads and fallacies.

UNIT II

2. Nutrition through the life cycle.

a) Nutrition for adults- at different activity levels and socio economic levels.

b) Pregnancy- physiology of pregnancy, factors affecting pregnancy outcome, importance of adequate weight gain during pregnancy, nutritional requirements during pregnancy and modification of diet. Deficiency of nutrition's and its impact. Common problems of pregnancy and their management- nausea, vomiting, pica, food aversion, pregnancy induced hypertension (PIH). Adolescent pregnancy.

c) Lactation- nutritional requirements and dietary management. Galactogogues.

UNIT III

d) Infancy- nutritional requirements. Breast feeding-colostrums- importance in feeding. Advantages of exclusive breast-feeding. Nutritional and other advantages of breast-feeding. Bottle feeding- circumstances under which bottle-feeding is to be given. Care and sterilization of bottles/ Preparation of formula-modification of non-human milk for infant feeding. Mixed feeding- breast-feeding and artificial feeding, weaning. Introduction of complementary foods, food supplements at various stages.

e) Nutritional needs and dietary management of infants, preschool, school going children and adolescents. Establishment of good food habits.

f) Nutrition during old age-physiological changes, nutritional needs and dietary modification.

UNIT IV

3. Basic concept of diet therapy-meaning and importance of therapeutic nutrition. Modification of normal diet for therapeutic purposes. Full/regular diet, bland diet, soft and fluid diets. Methods of feeding patients- normal and artificial. Psychological factors in feeding and the problems involved. Dietitian qualities to be possessed, role and responsibilities.

4. Energy modification and nutritional care for weight management- identifying underweight, overweight and obese. Modifying and controlling weight.

5. Predisposing factors, clinical **features** and dietary management of

a) Febrile diseases-acute and chronic

b) Gastrointestinal disturbances-

1) Gastritis, gastric and duodenal ulcers, constipation and diarrhoea.

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Paper II : Structural & Dynamic geomorphology
Paper III : Principles & Theory of Economic Geography
Paper IV : Geography of Environment

Note: A weekly seminar be arranged for M.A./ M. Sc. Previous and Final students.

1. Laboratory & map work test (4 hours duration)	40 marks
2. Record work and Viva-voce (25 +10)	35 marks
3. Project report & viva-voce (15+10)	25 marks
Total Marks	100 marks

Practical : Surveying and Laboratory Work

M.A./ M.Sc.FINAL GEOGRAPHY EXAMINATION 2022

Paper V : Advanced Geography of India

Paper VI : Any one of the following:

- Urban Geography
- Regional Planning & Development
- Cultural Geography
- Geography of Tourism

Paper VII : Any one of the following:

- Bio- geography
- Agriculture Geography
- Quantitative techniques in Geography
- Geography of Population & Settlement

Paper VIII : Any one of the following:

- Political Geograpgy
- Industrial Geography
- Climatology & Oceanography
- Remote sensing & G.I.S.

Dissertation : In lieu of Vi/ Vii/ Viii paper

Note: Each theory paper must be allotted minimum six hours per week for teaching.

Practical : Surveying and Laboratory Work

The distribution of marks in the practical will be as follows:

1. Laboratory work of four hours duration	40 marks
2. Record work & viva-voce (15+5)	20 marks
3. Field surveying & viva-voce (10+5)	15 marks
4. Survey camp & viva- voce (15+10)	25 marks
Total Marks	100 marks

N.B. 12 hours of teaching practical be provided per batch of 15 students per week.

Instruction for Geography Practical Examination:

- The record work should have 50 sheets (1/4th of 20"x30") and they should cover the total syllabus proportionately. The teacher should give fresh exercises every time so that the students may not undertake tracing of old exercises. The work must be done in the class room and signed on the same date. This would discourage completing the whole work at the nick of the examination. Emphasis should be laid on ink work.
- Viva-voce examination be held to judge the real knowledge of the student and to examine the authenticity of the record work, the marking on record work and its viva-voce be based on the original work of the candidate and not merely producing the record work get done by any other agency. Marks be deducted for the part of the syllabus not covered.
- On an average about 20 students be examined in one day in M.A./ M.Sc. Previous and Final. As far as possible one practical exercise to be set to judge the practical skill.
- The external examiners, be provided syllabus and detailed instruction at the time of obtaining his consent.

Note: A copy of the instructions be sent to the examiners for their information.

M.A./ M.Sc. PREVIOUS GEOGRAPHY EXAMINATION- 2022

PAPER-I: EVOLUTION OF GEOGRAPHICAL THOUGHT

Time : 3 hours duration

Max. Marks : 100

21. Wheeler, J.O.: Economic Geography, John Willey, New York, 1995.
22. Zimmerman, E,W.: World Resources and Industries, Harper & Co. New York.
23. K.N. Singh & Jagdish Singh: ArthikBhoogolkeMooltatva, Vasundhara, Gorakhpur.
24. P. Jain: ArthikBhoogol, rastogi, Meerut.
25. M. Haroon: arthikBhoogol, Vasundhara, Gorakhpur.
26. Jat, B.C.: ArthikBhoogol, Panchsheel, Jaipur.

PAPER -IV: GEOGRAPHY OF ENVIRONMENT

Time : 3 hours duration

Max. Marks : 100

Note : The question paper shall contain three sections. Section A shall contain 10 questions two from each unit of 2 marks each. The candidate is required to answer all the questions. The answers should not exceed 50 words. Section B shall contain 10 questions two from each unit. The candidate is required to answer five questions one each from each unit. Each question shall be of 7 marks. The answers should not exceed 200 words. Section C shall contain 5 questions one from each unit of 15 marks each. The candidate is required to answer any three questions. The answer shall not exceed 500 words.

UNIT-I

Concept of environment, meaning, nature and scope of environmental geography; Concept of ecology and ecosystem: definition and elements, energy flow and productivity in ecosystem, eco-cycles, types of eco-system.

UNIT-II

Man- environment relationship, perception of environment and its quality, degradation of environment, development vis-à-vis eco-crises; Population, resources and eco-crises; environment and quality of life.

UNIT – III

Environmental hazards and pollution problem- water, air, noise, soil and radioactive: causes, impact and measures of control with Indian examples.

UNIT – IV

Environmental management- management of forest, soil, wild life, energy and mineral resources, Environmental education, monitoring and mapping, conservation of natural resources.

UNIT – V

Ecological planning for sustainable development in India, environmental polices and programmes (international and national) , environmental problems and planning in India.

Books recommended:

1. Batel, B.(ed): Management of Environment, Wiby eastern Ltd. New Delhi, 1980.
2. BrijGopal: Elements of Ecology
3. Centre for Science & Environment: The State of India Environment: A citizen's Report, 1982, 1985, New Delhi.
4. DeshBandhu (ed.): Environmental Management, Indian Environment Society, New Delhi.
5. Gupta & Gurjar: sustainable Development, Rawat, Jaipur.
6. Kaswan, N.R. : Man and Environment (Hindi), Malik & Co. Jaipur, 1999.
7. Mathur, H.S.: Biogeography
8. Park, C.C: Ecology and Environmental Management, Butterworths, London, 1980.
9. P.D. Sharma: Ecology and Environment, Rastogi, Meerut, 2010.
10. Peter Cotgreave & Irwin Forseth: Introductory Ecology, Blackwell, 2002.
11. Savinder Singh: Geography of Environment, Allahbad
12. Singh & Singh (ed.): Geography of Environment, Concept, New Delhi
13. Strahler, A.N.: Geography and Man's Environment, John Willey, New York, 1976.
14. V.K. Srivastava: ParyavaranBhoogolevmParisthitiki, Vasundhara, Gorakhpur.

PRACTICAL

Distribution of marks will be as follows:

1. Laboratory & map work test (4 hours duration)	40 marks
2. Record work and Viva-voce (25 +10)	35 marks
3. Project report & viva-voce (15+10)	25 marks
Total Marks	100 marks

N.B. 12 hours of teaching practical be provided per batch of 15 students per week.

Group B(i)
Labour Economics

3 hrs. duration

Max. Marks: 100

Note : The question paper shall contain three sections. Section-A shall contain 10 questions two from each unit of 2 marks each. The candidate is required to answer all the questions. The answer should not exceed 50 words. Section-B shall contain 5 questions one from each unit with internal choice. Each question shall be of 7 marks. The answers should not exceed 200 words. The candidate is required to answer all the questions. Section-C shall contain 5 questions of 15 marks each, one from each unit. The candidate is required to answer any three questions. The answer shall not exceed 500 words.

Unit – I

Salient features of Trade Union in General; Functions, Structures and Finances of Trade Union. Detailed study of Trade Union Movement in India; Major trade unions; memberships and their policy in India. Salient features of trade union in UK and USA Employers organization in India. Functions and Achievements of International Labour Organization; ILO and India.

Unit – II

Labour Market : Characteristics of Labour Market, Wage Theories; Marginal Productivity, Demand and Supply and Collective Bargaining. Problems of Collective Bargaining in India. Industrial dispute : Prevention and Settlement. Negotiation and collective agreements.

Unit – III

Wage Payment: Methods of wages payment, Incentive wage payment, system of wages payment in India. Exploitation of Labour, Causes of wages differentials, economy of high wages. Wages of Industrial and agricultural workers in India. Standard of living of workers in India.

Unit – IV

Organization, Functions and Achievements of Employment Service, Organization in UK and USA (in general). Methods of labour recruitment in India, National Employment Service Organization in India. Man Power Planning in India. A critical study of the working of conciliation of arbitration in India.

Unit – V

Factory Legislation and Labour Welfare: Main features of present legislation in India. Social Security in the UK, USA and India (in general). Labour Welfare in India: Policy and Measures.

SUGGESTED BOOKS

1. Paul Sultan: Labour Economics, Henry Holt.
2. Gitlow, A.L. : Labour and Industrial Society.
3. Peling, H. : A History of British Trade Unionism.
4. Sinha, G.P. and Sinha P.R.N. : Industrial Relations and Labour Legislation, Oxford RH.
5. Pant, S.C. : Indian Labour Problems.
6. Puneekar and Nadhuri : Trade Union Leadership in India.
7. Herold Orouch: Trade Union and Politics in India.
8. Millen, H. : The Political Role of Labour in Developing Countries
9. Collective Bargaining: A Workers Education Manual (ILO)
10. Flanders, A (ed.) : Collective Bargaining.
11. Johari, C.K. : Unionism in a developing economy.
12. Yoder, D. and Heneman : Labour Economics and Industrial
13. Relations, South Western Publishing CO.
14. Carter, AM. : Theory of Wages and Employment.
15. Gitlow, AL. : Labour and Industrial Society.
16. Singh, V.B. (ed.) : Industrial Labour of India.
17. Bloom and Northrup: Economics of Labour Relations.
18. Sindha, M.R. (ed.) : The Economics of Manpower Planning.
19. Nigam, S.B.L. State Regulation of Minimum Wages.
20. Polkar, S.A : Problems of Wage Policy for Economic Development.
21. Dobb, M. : Wages (E and H).
22. Johari, C.K. (ed.) : Issue in Indian Labour Policy.
23. Gilbert, B. : The Evaluation of National Insurance in Great Britain

GROUP B(ii)
ENVIRONMENTAL ECONOMICS

3 hrs. duration

Max. Marks: 100

Note : The question paper shall contain three sections. Section-A shall contain 10 questions two from each unit of 2 marks each. The candidate is required to answer all the questions. The answer should not exceed 50 words. Section-B shall contain 5 questions one from each unit with internal choice. Each question shall be of 7 marks. The answers should not exceed 200 words. The candidate is required to answer all the questions. Section-C shall contain 5 questions of 15 marks each, one from each unit. The candidate is required to answer any three questions. The answer shall not exceed 500 words.

Unit - I

Fundamentals of Environmental Economics - Ecosystems Definition and role of Economics. Scope of Environmental Economics. Basic Theory of Environmental Economics. Environmental Quality as a public good. Environmental problems in developed and developing economies.

Unit - II

Natural Resources. Economics and conservation of natural resources. Environmental Pollution - Types of pollution. Air Pollution : Atmosphere, types of air pollutants. Sources of air pollution, Effects of air pollution on vegetation agriculture, forest, animal, social and human being. Global consequences of air pollution, Noise, Radiation and Space Pollution.

Unit - III

Water Pollution. Source of water pollutants, industrial and agriculture pollutants. effects of water pollution on agriculture, vegetation, animals and human being. Waste water treatments. Impact and use, Global Polluter, Impact of pesticides and Fertilizers on environment and health. Impact of air, land and water pollution agriculture. Agriculture without pollution.

Unit - IV

Important concepts and issues in environmental protection, Cost benefit Analysis, the Environmental costs of economic growth. Limits to growth, environmental issue in developed and developing Economies. The concept of Sustainable development.

Unit - V

Indian Philosophy of sustainable development Views of Ancient Indian Thinkers, Jain Philosophy, Gandhian Philosophy and Deen Dayal Upadhyay's concept of Ekatma Arthniti. sustainable Development strategies for agriculture, industry, natural resources, deserts energy production and fisheries. Brief study of international organizations in the field of Environment and Development - World Commission of Environment and Development (WCED), World Bank and World Wide Fund (WWF.) Environmental Policy of Govt. of India and Rajasthan.

SUGGESTED BOOKS

1. Karpagam, M.: Environmental Economics, Sterling publishers Pvt. Ltd.
2. Simonis E. Udo : Ecology and Economics Policy.
3. Barbier, Edward B. : Economics: natural Resource Scarcity and Development, Earthscan Publication (1989), London. .
4. Pearce, D.W. : Environmental Economics, Longman.
5. Hamrin, Robert D. : A Renewable Resource Economy, Praeger (1983).
6. Katyal, Timmy and Satake : Environmental Pollution, Anmol Publications, New Delhi.
7. Chand Attar: Environment challenges, UDH Publishers, Delhi.
8. Sekor Singh (ed.) : Environmental Policy in India, Indian institute of Public Administration New Delhi.
9. Nathawat, Shashtri and Vyas : Man, Nature and Environmental Law (1988), RBSA Publisher, Jaipur
10. Swami Nathan M.S. and Jana S. : Biodiversity Implications for Global Security, M.C. Millan Publishers, New Delhi (1994).
11. Lodha, S.L. and Mahendra Lodha: Economics of Environment.

GROUP:B(iii) REGIONAL ECONOMICS

3 hrs. duration

Max. Marks: 100

Note : The question paper shall contain three sections. Section-A shall contain 10 questions two from each unit of 2 marks each. The candidate is required to answer all the questions. The answer should not exceed 50 words. Section-B shall contain 5 questions one from each unit with internal choice. Each question shall be of 7 marks. The answers should not exceed 200 words. The candidate is required to answer all the questions. Section-C shall contain 5 questions of 15 marks each, one from each unit. The candidate is required to answer any three questions. The answer shall not exceed 500 words.

Unit - I

Regional Economics : Scope and Importance. Regions and their types. Economics of Location, General Factors affecting location. Weber's theory of locations, Sargant Florence, Edgar Hoover, Plunder Green hut and island on industrial location

Unit - II

Hotelling Principle. Quotient, coefficient of specialization, coefficient of localization curve, shift and share analysis, Mix and share analysis.

Unit - III

Regional Flows: Commodity and service flows versus Monetary flows and capital, input output analysis, Regional Multiplier and Industrial complex analysis.

Unit - IV

Special theories of regional growth: Cumulative causation theory of Myrdal growth : Centres and Growth Points. Regional planning concepts, Regional plan Vs. National Plan.

MGSU BIKANER

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नोट : प्राणियों का विच्छेदन यू.जी.सी. के नियमानुसार एवं वन्य जीव सुरक्षा अधिनियम के तहत उन्हीं प्राणियों का किया जाये जिन पर प्रतिबन्ध नहीं है।

अंकों का वितरण –

नियमित अभ्यास	नियमित विद्यार्थी	पूर्व विद्यार्थी
1. पारिस्थितिकी	7	9
2. आनुवंशिकी	5	7
3. जैवसांख्यिकी	5	7
4. व्यावहारिक	5	7
5. स्थाई स्लाइड	5	6
6. अन्तःस्रावी ग्रंथी	5	7
7. प्रोजेक्ट रिपोर्ट	5	छपस
8. प्रादर्श	10	10
9. रिकोर्ड	8	छपस
10. मौखिक	10	12
कुल योग	65	65

SYLLABUS BOTANY

B.Sc. Part - III 2023-24

Scheme

Three Papers		Max. Marks : 135	Minimum Marks- 48
Paper I	3 Hours Duration	45Marks	16
Paper II	3 Hours Duration	45 Marks	16
Paper III	3 Hours Duration	45 Marks	16
Practical :	5 Hours Duration,	, Max. Marks : 65	Min. Pass Marks : 24
(One day)			

PAPER 1 – ECOLOGY AND PHYTOGEOGRAPHY

Unit-I

Plant Ecology: Definition, scope, branches, Ecological factor affecting the vegetation. Ecosystem: Structure, its biotic and abiotic components, food chain and food web, ecological pyramids, energy flow, biogeochemical cycles.

Unit-II

Productivity: Primary and secondary productivity and their measurements.

Plant succession: causes. Process, types: Hydrosere, Xerosere (Lithosere and Psammosere). Community : Structure and development.

Unit-III

Pollution of air, water, noise: their causes, consequences and control.

Resources: Renewable and non-renewable, management problem of depletion of natural vegetation; endangered plants. Red data book. National Parks and sanctuaries.

Unit-IV

Plant adaptations: Hydrophytes, Xerophytes and Halophytes (morphological, anatomical and physiological adaptations).

Ecology of Rajasthan Desert.

Unit-V

Biodiversity, Phytogeography: Introduction, continuous and discontinuous distribution, Phytogeography of India, Vegetation regions of India, Plant indicators.

PAPER II- PLANT PHYSIOLOGY AND BIOCHEMISTRY

Unit-I

Osmosis, plasmolysis, deplasmolysis Adsorption. Absorption of water. Ascent of sap. Concept of water potential. Transpiration (mechanism of opening & closing of stomata) factors affecting transpiration and its importance Role of macro and micro elements.

Unit-II

Photosynthesis: Photosynthetic pigments (Chlorophylls, carotenoids and phycobilins)- structure and function. Light reactions mechanism of carbon fixation in C₃ and C₄ plants. Brief description of C.A.M. plants, compensation point. Factors affecting photosynthesis.

Unit-III

Respiration: Glycolysis, Krebs cycle, electron transport system and oxidative phosphorylation, Photo-respiration factors affecting respiration. Fats: synthesis and degradation.

Unit-IV

Plant growth regulators: Auxins, gibberellins, cytokinins, ethylene and abscisic acid, their discovery, structure, physiological effects and applications. Seed dormancy, senescence, photoperiodism and vernalization.

Unit-V

Enzymes General Characteristics, classification, mode of action, inhibitors. Principles and use of following instruments, techniques: pH measurement, centrifugation, colorimetry, chromatography (PC, TLC).

PAPER III - MOLECULAR BIOLOGY & BIOTECHNOLOGY

Unit-I

Gene concept from Mendel to molecular level, Genetic code, DNA types: DNA replication and transcription in prokaryotic system. Nif gene and nitrogen fixation.

Unit-II

Plasmids, kinds and their uses as vectors, principle of genetic engineering and recombinant DNA technology . Tools of genetic engineering (PCR, gene sequencing , restriction enzymes, genomic library).

Unit-III

Interaction and expression of trans genes, Bt-toxin, Methods of gene transfer in higher plants, vector mediated gene transfer. Brief account of vectorless gene transfer (Particle gun, liposomes, chemical methods).

Unit-IV

History and scope of plant tissue culture. Basic techniques and tools of plant tissue culture. Brief amount of protoplast culture and fusion. Plant tissue culture in agriculture and forestry. Micropropagation and somatic embryogenesis.

unit-v

Plant tissue culture in industry, secondary plant products: definition types and uses of alkaloids, factors affecting production of secondary products in cultures grown in bioreactors (fermentors).

PRACTICALS

PAPER I: ECOLOGY AND PHYTOGEOGRAPHY

1. Find out the density, frequency & abundance of herbaceous species by quadrat method.
2. To find out the minimum size of the quadrat.
3. Plant adaptive modifications. Specimens/slides.
Opuntia, Euphorbia, Capparis, Leptadenia, Hydrilla, Eichhornia and Typha.
4. Soil analysis: Field tests.
a. Soil texture b. Soil moisture c. Soil pH
5. Water analysis
a. Hardness of water b. Water temperature
c. Carbonate, bicarbonate & chloride tests.
6. Ecological instruments and their working.
a. Maximum and minimum thermometer b. Oven.

PAPER III: PLANT PHYSIOLOGY AND BIOCHEMISTRY

1. To observe streaming movement of protoplasm (*Hydrilla*).
2. Demonstration of phenomenon of plasmolysis using *Rhoeo* discolor leaves.
3. Demonstration of phenomenon of osmosis by potato osmoscope.
4. Unequal transpiration by four leaf method
5. Demonstration of unequal transpiration in dorsiventral leaf using cobalt chloride paper.
6. Effect of various wavelengths of light on the process of photosynthesis.
7. Demonstration that light, CO₂ and chlorophyll are necessary for