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FYUGP

**GEOGRAPHY HONOURS/ RESEARCH**

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FOR UNDER GRADUATE COURSES UNDER N P UNIVERSITY



Implemented from  
Academic Session 2022-2026



## **Members of Board of Studies of Four-Year Under Graduate Programme (FYUGP) Syllabus as per Guidelines of the N P University, Medininagar**

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## **HIGHLIGHTS OF REGULATIONS OF FYUGP**

### **PROGRAMME DURATION**

- The Full-time, Regular UG programme for a regular student shall be for a period of four years with multiple entry and multiple exit options.
- The session shall commence from **1<sup>st</sup> of July**.

### **ELIGIBILITY**

- The selection for admission will be primarily based on availability of seats in the Major subject and marks imposed by the institution. Merit point for selection will be based on marks obtained in Major subject at Class 12 (or equivalent level) or the aggregate marks of Class 12 (or equivalent level) if Marks of the Major subject is not available. Reservation norms of The Government of Jharkhand must be followed as amended in times.

### **ADMISSION PROCEDURE**

- The reservation policy of the Government of Jharkhand shall apply in admission and the benefit of the same shall be given to the candidates belonging to the State of Jharkhand only. The candidates of other states in the reserved category shall be treated as General category candidates. Other relaxations or reservations shall be applicable as per the prevailing guidelines of the University for FYUGP.

### **ACADEMIC CALENDAR**

- Each year the University shall draw out a calendar of academic and associated activities, which shall be strictly adhered to. The same is non-negotiable. Further, the Department will make all reasonable endeavors to deliver the programmes of study and other educational services as mentioned in its Information Brochure and website. However, circumstances may change prompting the Department to reserve the right to change the content and delivery of courses, discontinue or combine courses and introduce or withdraw areas of specialization.

### **PROGRAMME OVERVIEW/ SCHEME OF THE PROGRAMME**

- Undergraduate degree programmes of either 3 or 4-year duration, with multiple entries and exit points and re-entry options within this period, with appropriate certifications such as:
  - a Certificate after completing 1 year (2 semesters) of study in the chosen fields of study,
  - a Diploma after 2 years (4 semesters) of study,
  - a Bachelor after a 3-year (6 semesters) programme of study,
  - a Bachelor (with Hons. / Research) after a 4-year (8 semesters) programme of study

## VALIDITY OF REGISTRATION

- Validity of a registration for FYUGP will be for maximum for Seven years from the date of registration.

## CALCULATION OF MARKS FOR THE PURPOSE OF RESULT

- Student's final marks and the result will be based on the marks obtained in Semester Internal Examination and End Semester Examination organized taken together.
- Passing in a subject will depend on the collective marks obtained in Semester internal and End Semester University Examination both. However, students must pass in Theory and Practical Examinations separately.

## PROMOTION AND SPAN PERIOD

- i. The Requisite Marks obtained by a student in a particular subject will be the criteria for promotion to the next Semester.
- ii. No student will be detained in odd Semesters (I, III, V & VII).
- iii. To get promotion from Semester-II to Semester-III a student will be required to pass in at least 75% of Courses in an academic year (a student has to pass in minimum 9 papers out of the total 12 papers. However, it will be necessary to procure pass marks in each of the paper before completion of the course.
- iv. To get promotion from Semester-IV to Semester-V (taken together of Semester I, II, III & IV) a student has to pass in minimum 16 papers out of the total 22 papers.
- v. Eligibility to get entry in Semester VII is to secure a minimum of 7.5 CGPA up to semester VI along with other criteria imposed by the Institution.

## PUBLICATION OF RESULT

- The result if the examination shall be notified by the Controller of Examinations of the University in different newspapers and also on University website.
- If a student is found indulged in any kind of malpractice/ unfair means during examination, the examination taken by the student for the semester will be cancelled. The candidate has to reappear in all the papers of the session with the students of next coming session and his one year will be detained. However, marks secured by the candidate in all previous semesters will remain unaffected.
- There shall be no Supplementary or Re-examination for any subject. Students who have failed in any subject in an even semester may appear in the subsequent even semester examination for clearing the backlog. Similarly, the students who have failed in any subject in an odd semester may appear in the subsequent odd semester examination for clearing the backlog.
- Regulation related with any concern not mentioned above shall be guided by the Regulations of the University for FYUGP.

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## COURSE STRUCTURE FOR FYUGP 'HONOURS/ RESEARCH'

Table 1: Credit Framework for Four Year Undergraduate Programme (FYUGP) under State Universities of Jharkhand [Total Credits = 176]

Semester	Common Courses (29)									Introductory Courses (15)		Internship/ Project (4)	Major* (54) + Adv. Major (24)	Minor** (32)		Research Courses (18)				Total Credit
	Language and Communication Skills (Modern Indian Language including TRL) (6)	Language and Communication Skills (English) (6)	Environmental Studies (3)	Understanding India (2)	Health & Wellness, Yoga Education, Sports & Fitness (2)	Digital Education (3)	Mathematical & Computational Thinking and Analysis (2)	Value-Based Course/ Global Citizenship Education (2)	Community Engagement/ NCC/ NSS/ (3)	Introductory Courses [Natural Sc./ Humanities/ Social Sc./Commerce] (9)	Introductory Course [Vocational Studies] (6)			Natural Sc./ Humanities/ Social Sc./ Commerce (18)	Vocational Studies (14)	Research Methodology Courses (6)	Research Proposal, Review of literature (4)	Research Internship/ Field Work (4)	Preparation of the Research Project Report (4)	
1	2	3	4	5	6	7	8			9	10	11	14	15	16	17	18	19	20	21
<b>I</b>	6			2	2					3	3		6							<b>22</b>
<b>II</b>		6					2	2		3	3		6							<b>22</b>
<b>Exit Point: Undergraduate Certificate</b>																				
<b>III</b>			3			3			3	3		4	6							<b>22</b>
<b>IV</b>													6+6	6	4					<b>22</b>
<b>Exit Point: Undergraduate Diploma</b>																				
<b>V</b>													6+6	6	4					<b>22</b>
<b>VI</b>													6+6	6	4					<b>22</b>
<b>Exit Point: Bachelor's Degree</b>																				
<b>VII</b>													6+6 (Adv. Topics)			6	4			<b>22</b>
<b>VIII</b>													6+6 (Adv. Topics)		2			4	4	<b>22</b>
<b>Exit Point: Bachelor's Degree with Hons. /Research</b>																				

\*There will be four disciplinary areas: A-Natural Science, B-Humanities, C-Social Science, and D-Commerce; each having basket of courses. A student will have to select a 'Major' from any of the four disciplinary areas (out of A, B, C & D). The selection for admission will be primarily based on availability of seats in Major and marks imposed by the institution.

\*\*A student has to select three subjects for 'Introductory Regular Courses' from a pool of subjects associated with the Major offered by the institution. One of the three subjects will continue as 'Minor' from semester IV onwards, based on the academic interest and performance of the student.

Session 2022-26 onwards

## COURSES OF STUDY FOR FOUR YEAR UNDERGRADUATE PROGRAMME

**Table 2: Course structure for Undergraduate Certificate Programme [May Exit after Sem.-II]**

Semester	Common Courses			Introductory Courses		Major	Total Credits
Sem.-I	LCS (MIL/TRL)  (6 Credits)	Understanding India  (2 Credits)	Health & Wellness, Yoga Education, Sports & Fitness (2 Credits)	IRC-1  (3 Credits)	IVS-1A  (3 Credits)	MJ-1  (6 Credits)	(22)
Sem.-II	LCS (English)  (6 Credits)	Global Citizenship Education (2 Credits)	Mathematical & Computational Thinking (2 Credits)	IRC-2  (3 Credits)	IVS-1B  (3 Credits)	MJ-2  (6 Credits)	(22)

**Total = 44 Credits**

(LCS: Language and Communication Skills; MIL: Modern Indian Languages; TRL: Tribal Regional Languages;  
IRC: Introductory Regular Courses; IVS: Introductory Vocational Studies, MJ: Major)

**Table 3: Course structure for Undergraduate Diploma Programme [May Exit after Sem.-IV]**

Semester	Common Courses			Introductory	Major Courses Credits	Minor	Internship/ Project	Vocational Project	Total
Sem.-III	Environmental Studies  (3 Credits)	Community Engagement/ NCC/ NSS (3 Credits)	Digital Education (3 Credits)	IRC-3  (3 Credits)	MJ-3  (6 Credits)		Internship/ Project  (4 Credits)		(22)
Sem.-IV					MJ-4, MJ-5 (6+6=12 Credits)	MN-1 (6 Credits)		VS-1 (4 Credits)	(22)

**Total = 88 Credits**

(MN: Minor; VS: Vocational Studies)

**Table 4: Course structure for Bachelor's Degree Programme [May Exit after Sem.-VI]**

Semester	Major Courses	Minor Courses	Vocational	Total Credits
Sem.-V	MJ-6, MJ-7 (6+6 = 12 Credits)	MN-2 (6 Credits)	VS-2 (4 Credits)	(22)
Sem.-VI	MJ-8, MJ-9 (6+6= 12 Credits)	MN-3 (6 Credits)	VS-3 (4 Credits)	(22)

**Total = 132 Credits****Table 5: Course structure for Bachelor's Degree with Hons./Research Programme**

Semester	Advance Courses	Research Courses	Vocational	Total Credit
Sem.-VII	AMJ-1, AMJ-2 (6+6=12 Credits)	Research Methodology (6 Credits)	Research Proposal (4 Credits)	(22)
Sem.-VIII	AMJ-3, AMJ-4 (6+6=12 Credits)	Research Int./Field Work (4 Credits)	Research Report (4 Credits)	VSR (2 Credits) (22)

**Total = 176 Credits**

(AMJ: Advance Major; VSR: Vocational Studies associated with Research)



**Table 6: Semester wise Course Code and Credit Points:**

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits
	Code	Papers	
<b>I</b>	CC-1	Language and Communication Skills (Modern Indian language including TRL)	6
	CC-2	Understanding India	2
	CC-3	Health & Wellness, Yoga Education, Sports & Fitness	2
	IRC-1	Introductory Regular Course-1	3
	IVS-1A	Introductory Vocational Studies-1	3
	MJ-1	Major paper 1 (Disciplinary/Interdisciplinary Major)	6
<b>II</b>	CC-4	Language and Communication Skills (English)	6
	CC-5	Mathematical & Computation Thinking Analysis	2
	CC-6	Global Citizenship Education & Education for Sustainable Development	2
	IRC-2	Introductory Regular Course-2	3
	IVS-1B	Introductory Vocational Studies-2	3
	MJ-2	Major paper 2 (Disciplinary/Interdisciplinary Major)	6
<b>III</b>	CC-7	Environmental Studies	3
	CC-8	Digital Education (Elementary Computer Applications)	3
	CC-9	Community Engagement & Service (NSS/ NCC/ Adult Education)	3
	IRC-3	Introductory Regular Course-3	3
	IAP	Internship/Apprenticeship/ Project	4
	MJ-3	Major paper 3 (Disciplinary/Interdisciplinary Major)	6
<b>IV</b>	MJ-4	Major paper 4 (Disciplinary/Interdisciplinary Major)	6
	MJ-5	Major paper 5 (Disciplinary/Interdisciplinary Major)	6
	MN-1	Minor Paper 1 (Disciplinary/Interdisciplinary Minor)	6
	VS-1	Vocational Studies-1 (Minor)	4

<b>V</b>	MJ-6	Major paper 6 (Disciplinary/Interdisciplinary Major)	6
	MJ-7	Major paper 7 (Disciplinary/Interdisciplinary Major)	6
	MN-2	Minor Paper 2 (Disciplinary/Interdisciplinary Minor)	6
	VS-2	Vocational Studies 2 (Minor)	4
<b>VI</b>	MJ-8	Major paper 8 (Disciplinary/Interdisciplinary Major)	6
	MJ-9	Major paper 9 (Disciplinary/Interdisciplinary Major)	6
	MN-3	Minor Paper 3 (Disciplinary/Interdisciplinary Minor)	6
	VS-3	Vocational Studies 3 (Minor)	4
<b>VII</b>	AMJ-1	Advance Major paper 1 (Disciplinary/Interdisciplinary Major)	6
	AMJ-2	Advance Major paper 2 (Disciplinary/Interdisciplinary Major)	6
	RC-1	Research Methodology	6
	RC-2	Research Proposal	4
<b>VIII</b>	AMJ-3	Advance Major paper 3 (Disciplinary/Interdisciplinary Major)	6
	AMJ-4	Advance Major paper 4 (Disciplinary/Interdisciplinary Major)	6
	RC-3	Research Internship/Field Work	4
	RC-4	Research Report	4
	VSR	Vocational Studies (Associated with Research)	2
		<b>Total Credit</b>	<b>176</b>

**Abbreviations:**

CC Common Courses

IRC Introductory Regular Courses

IVS Introductory Vocational Studies

IAP Internship/Apprenticeship/ Project

VS Vocational Studies

MJ Major Disciplinary/Interdisciplinary Courses

MN Minor Disciplinary/Interdisciplinary Courses

AMJ Advance Major Disciplinary/Interdisciplinary Courses

RC Research Courses

VSR Vocational Studies associated with Research

## SEMESTER WISE COURSES IN GEOGRAPHY FOR FYUGP

**2022 onwards****Table 7: Semester wise Examination Structure in Discipline Courses:**

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Examination Structure			
	Code	Papers	Credits	Mid Semester Theory (F.M.)	End Semester Theory (F.M.)	End Semester Practical/ Viva (F.M.)
<b>I</b>	MJ-1	Geomorphology	6	15	60	25
<b>II</b>	MJ-2	Climatology and Oceanography	6	15	60	25
<b>III</b>	MJ-3	Human and Settlement Geography	6	15	60	25
<b>IV</b>	MJ-4	Evolution of Geographical Thought	6	15	60	25
	MJ-5	Fundamentals of Remote Sensing & GIS	6	15	60	25
<b>V</b>	MJ-6	Economic Geography	6	15	60	25
	MJ-7	Geography of India & Jharkhand	6	15	60	25
<b>VI</b>	MJ-8	Biogeography	6	15	60	25
	MJ-9	Political Geography	6	15	60	25
<b>VII</b>	AMJ-1	Regional Planning and Development	6	15	60	25
	AMJ-2	Natural Resource Management and Environmental Geography	6	15	60	25
	RC-1	Research Methodology	6	25	75	---
	RC-2	Research Proposal	4	25	75	---
<b>VIII</b>	AMJ-3	Population and Urban Geography	6	15	60	25
	AMJ-4	Agriculture Geography	6	15	60	25
	RC-3	Research Internship/Field Work	4	---	---	100
	RC-4	Research Report	4	---	---	100
	VSR	Vocational Studies (Associated with Research)	2	---	---	100
		<b>Total Credit</b>	<b>98</b>			

**Table 8: Semester wise Course Code and Credit Points:**

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Examination Structure			
	Code	Papers	Credits	Mid Semester Theory (F.M.)	End Semester Theory (F.M.)	End Semester Practical/ Viva (F.M.)
<b>I/ II/ III</b>	IRC	Introductory Geography	3	---	100	---
<b>IV</b>	MN-1	Geography of India and Jharkhand	6	15	60	25
<b>V</b>	MN-2	Environmental Geography & Sustainable Development	6	15	60	25
<b>VI</b>	MN-3	Climate Change Vulnerability and Adaptation	6	15	60	25
		<b>Total Credit</b>	<b>21</b>			

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## AIMS OF BACHELOR'S DEGREE PROGRAMME IN GEOGRAPHY

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**The aim of bachelor's degree programme in Geography is intended to provide:**

1. **Basic Concept:** The fundamental concepts and philosophical foundation of each course need to be discussed.
2. **Understanding Landscape:** An understanding of landscape at different levels needs to be discussed and understood for a thorough knowledge of spatial dimensions.
3. **Understanding Ecosystem Structure and Potential:** To comprehend the dynamic dimensions of human and ecosystem relationships.
4. **Human Perception and Behaviour:** Learning human perception and behaviour to acquire the geographical knowledge evolved over time, is essential to improve decision making process.
5. **Identification of Critical Problems and Issues:** Detection and identification of the critical problems and spatial issues are essential for sustainable development.
6. **Field Based Knowledge:** Field based knowledge is essential to understand the ground reality, spatial patterns and processes.
7. **Spatial Tools and Techniques:** The basics and applications of spatial tools and techniques are essential to make the studies more scientific and applicable.
8. **Statistical Techniques:** Use of statistical tools and techniques is essential for precise and objective geographic analysis and interpretation of complex phenomena.
9. **Applied Dimensions:** Identification of the critical problems and spatial issues form the core of the modern geography for various applications and decision making, including
10. **Planning:** Resources, Environment & Disaster Management, Land Use Planning, and Urban and Regional Development together with Climate Change Mitigation and Adaptation, etc.
11. **Case Study based Analysis:** There is a need to understand the specificities of the problems in specific areas for them in depth comprehension and solution. The case studies are essential, especially to find out the solutions to the lagging regions for their solutions based on first-hand information.

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## PROGRAM LEARNING OUTCOMES

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### **The programme learning outcomes relating to Honours/Research Degree in Geography:**

1. Demonstrating the understanding of basic concepts in geography.
2. Demonstrating the coherent and systematic knowledge in the discipline of geography to deal with current issues and their solution.
3. Display an ability to read and understand maps and topographic sheets to look at the various aspects on the space.
4. Cultivate ability to evaluate critically the wider chain of network of spatial aspects from global to local level on various time scales as well.
5. Recognize the skill development in Geographical studies programme as part of career avenues in various fields like teaching, research and administration.
6. It is also suggested that after the completion of FYUGP Hons./Research, students should be able to demonstrate the knowledge obtained in such way so that they can explore the employability options and service to the society.

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## SEMESTER I

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### I. MAJOR COURSE –MJ 1:

(Credits: Theory-04, Practicals-02)

**Marks: 15 (5 Attd. + 10 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75**

**Pass Marks: Th (SIE + ESE) = 30**

#### *Instruction to Question Setter for*

#### Semester Internal Examination (SIE 10+5=15 marks):

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

#### End Semester Examination (ESE 60 marks):

There will be **two** group of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to answer.

*Note: There may be subdivisions in each question asked in Theory Examinations.*

## GEOMORPHOLOGY

**Theory: 60 Lectures**

### Course Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the functioning of Earth systems in real time and analyze how the natural and anthropogenic operating factors affects the development of landforms
2. Distinguish between the mechanisms that control these processes
3. Assess the roles of structure, stage and time in shaping the landforms, interpret geomorphological maps and apply the knowledge in geographical research.

### Course Content:

1. Geological Time Scale
2. Geomorphology: Nature and Scope, Earth: Interior Structure and Isostasy: Concept of Airy and Pratt
3. Earth Movements: Continental Drift Theory, Types of Folds and Faults, Earthquakes
4. Geomorphic Processes: Gradation, Mass Wasting, Cycle of Erosion (Davis).
5. Evolution of Landforms (Erosional and Depositional): Fluvial, Karst, Aeolian & Glacial

### Reference Books:

1. Bloom, A. L., (2003): Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi.
2. Singh Savindra(2015): Bhuakriti vigyan ka Swarup, Prayag Pustak Bhawan, Allahabad
3. Bridges, E. M., (1990): World Geomorphology, Cambridge University Press, Cambridge.
4. Christopherson, R. W. and Birkeland, G. H., (2012) Geosystems: An Introduction to Physical

- Geography (8th edition), Pearson Education, New Jersey.
5. Das Gupta, A and Kapoor, A.N., (2001) Principles of Physical Geography, S.C. Chand & Company Ltd. New Delhi
  6. Dayal, P., (1996) A Text book of Geomorphology. Shukla Book Depot, Patna.
  7. Huggett, R.J. (2007) Fundamentals of Geomorphology, Routledge, New York.
  8. Kale, V. S. and Gupta A., (2001): Introduction to Geomorphology, Orient Longman, Hyderabad.
  9. Khullar, D.R., (2012)Physical Geography, Kalyani Publishers, New Delhi.
  10. Mal, Suraj, Singh, R.B. and Huggel, Christian (2018): Climate Change, Extreme Events and Disaster Risk Reduction, Springer, Switzerland, pages 309.
  11. Selby, M.J., (2005): Earth's Changing Surface, Indian Edition, OUP
  12. Singh, S (2009):Bhautik Bhugol ka Swaroop (Hindi), Prayag Pustak, Allahabad.
  13. Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to Physical Geology, 4th Edition, John Wiley and Sons.
  14. Strahler, A. H. and Strahler, A N., (2001):Modern Physical Geography (4/E), John Wiley and Sons, Inc., New York.
  15. Summerfield M. A. (2013): Global Geomorphology, Routledge, New York
  16. Thornbury, W. D., (2004): Principles of Geomorphology, Wiley, New York.
  17. Tikka, R N (1989): Bhautik Bhugol ka Swaroop (Hindi), Kedarnath Ram Nath, Meerut
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**GEOGRAPHY PRACTICAL- MJ 1 LAB**

Marks : Pr (ESE: 3Hrs) =25

Pass Marks: Pr (ESE) = 10

***Instruction to Question Setter for******End Semester Examination (ESE):***

*There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:*

*Experiment = 15 marks*

*Practical record notebook = 05 marks*

*Viva-voce = 05 marks*

**CARTOGRAPHIC TECHNIQUES-I:****60 Lectures****Course Learning Outcomes:**

After the completion of course, the students will have ability to:

1. Read and prepare maps.
2. Comprehend locational and spatial aspects of the earth surface.
3. Use and importance of maps for regional development and decision making.

**Course Content:**

1. Cartography: History, Nature and Scope
2. Scale: Concept & Application, Graphical Construction of Plain, Comparative, Diagonal Scale
3. Cross Profiles- Serial, Superimposed, Projected, Composite.
4. Topographical Map: Introduction, Interpretation, Identification of physical and cultural features (Conventional signs)

**Practical Record:** A Project File comprising one exercise each, on scale, profile, and interpretation of topographic sheet.

**Reference Books:**

1. Misra, R.P.,(2014): Fundamentals of Cartography (Second Revised and Enlarged Edition), Concept Publishing, New Delhi.
2. Monkhouse, F. J. and Wilkinson, H. R.,(1973): Maps and Diagrams, Methuen, London.
3. Robinson, A. H.,(2009): Elements of Cartography (6th Edition), John Wiley and Sons, New York.
4. Sarkar, A.,(2015):Practical geography: A systematic approach, Orient Black Swan Private Ltd., New Delhi
5. Sharma, J. P., (2010): Prayogic Bhugol(Hindi), Rastogi Publishers, Meerut.
6. Singh, R.L. and Singh R.P.B.,(1999): Elements of Practical Geography, Kalyani Publishers, New Delhi.
7. Singh, R.L. & Dutta, P.K., (2012):Prayogtmak Bhugol(Hindi), Central Book Depot, Allahabad
8. Singh,R.L.,& Singh, Rana. P.B.,(1991):Prayogtmak Bhugol ke Mool Tatva (Hindi), Kalyani Publishers, New Delhi
9. Steers, J.A. (1970):An Introduction to the Study of Map Projections, University of London Press, London.

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## SEMESTER II

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### I. MAJOR COURSE- MJ 2:

(Credits: Theory-04, Practicals-02)

Marks: 15 (5 Attd. + 10 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75

Pass Marks: Th (SIE + ESE) = 30

***Instruction to Question Setter for******Semester Internal Examination (SIE 10+5=15 marks):***

*There will be two group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 60 marks):***

*There will be two group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to answer.*

*Note: There may be subdivisions in each question asked in Theory Examinations.*

## CLIMATOLOGY AND OCEANOGRAPHY

**Theory: 60 Lectures****Course Learning Outcomes:**

After the completion of course, the students will have ability to:

1. Understand the elements of weather and climate and its impacts at different scales.
2. Comprehend the climatic aspects and its bearing on planet earth.
3. Understand the oceanic process and availability of resources.

**Course Content:**

1. Meaning, Nature & Scope of Climatology & Oceanography, Elements of Weather and Climate
2. Atmospheric Composition and Structure, Insolation and Temperature: Factors and Distribution, Heat Budget, Temperature Inversion.
3. Atmospheric Pressure and Winds: Planetary Winds, Forces affecting Winds, General Circulation of Air, Jet Streams; Atmospheric Moisture: Evaporation, Humidity, Condensation, Fog and Clouds, Precipitation Types, Stability and Instability; Climatic Regions; Climatic classification of Koeppen
4. Air mass and Fronts; Cyclones: Tropical Cyclones, Temperate Cyclones; Monsoon - Origin and Mechanism, El- Nino.
5. Ocean Floor Topography and Oceanic water Movements: Waves, Currents and Tides.
6. Ocean Salinity and Temperature: Distribution and Determinants; Coral Reefs and Marine Deposits and Ocean Resources.

**Reference Books:**

1. Anikouchine, W. A. and Sternberg, R. W., (1973): The World Oceans: An Introduction to Oceanography, Prentice-Hall.
  2. Barry, R. G., and Chorley, R. J., (2009): Atmosphere, Weather and Climate(9th Edition),Routledge, New York.
  3. Bhutani, S., (2000): Our Atmosphere, Kalyani Publishers, Ludhina.
  4. Critchfield, H. J., (1987): General Climatology, Prentice-Hall of India, New Delhi
  5. Gupta, L.S., (2000): Jalvayu Vigyan(Hindi),Madhyam Karyanvay Nidishalya, Delhi Vishwa Vidhyalaya, Delhi
  6. Kershaw, S., (2000): Oceanography: An Earth Science Perspective, Stanley Thornes, UK.
  7. Lal, D. S., (2006): Jalvayu Vigyan(Hindi),, Prayag Pustak Bhavan, Allahabad
  8. Lutgens, F. K., Tarbuck E. J. and Tasa D., (2009): The Atmosphere: An Introduction to Meteorology, Prentice-Hall, Englewood Cliffs, New Jersey.
  9. Oliver, J. E., and Hidore J. J., (2002): Climatology: An Atmospheric Science, Pearson Education, New Delhi.
  10. Pinet, P. R., (2008): Invitation to Oceanography (Fifth Edition), Jones and Barlett Publishers, USA, UK and Canada.
  11. Singh, S., (2009): Jalvayu Vigyan (Hindi),, Prayag Pustak Bhawan, Allahabad
  12. Strahler, A.N., (1987) Modern Physical Geography, John Wiley and Sons, New York, Singapore.
  13. Sverdrup, K. A. and Armbrust, E. V., (2008): An Introduction to the World Ocean, McGraw Hill, Boston.
  14. Trewartha, G. T., and Horne L. H., (1980): An Introduction to Climate, McGraw- Hill.
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**GEOGRAPHY PRACTICAL- MJ 2 LAB:****Marks : Pr (ESE: 3Hrs) =25****Pass Marks: Pr (ESE) = 10*****Instruction to Question Setter for******End Semester Examination (ESE):***

*There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:*

<i>Experiment</i>	<i>= 15 marks</i>
<i>Practical record notebook</i>	<i>= 05 marks</i>
<i>Viva-voce</i>	<i>= 05 marks</i>

**CARTOGRAPHIC TECHNIQUES-II:****60 Lectures****Course Learning Outcomes:**

After the completion of course, the students will have ability to:

1. Read and prepare maps.
2. Comprehend locational and spatial aspects of the earth surface.
3. Use and importance of maps for regional development and decision making.

**Course Content:**

1. Projection: Simple Conical (one standard and two standard parallel), Bonne's
2. Projection: Zenithal (Polar Zenithal Stereographic) Mercator's
3. Interpretation of weather maps, drawing of Climograph & Hythergraph

**Practical Record:** A Project File comprising one exercise each, on scale, profile, and interpretation of topographic sheet.

**Reference Books:**

1. Misra, R.P.,(2014): Fundamentals of Cartography (Second Revised and Enlarged Edition), Concept Publishing, New Delhi.
  2. Monkhouse, F. J. and Wilkinson, H. R.,(1973): Maps and Diagrams, Methuen, London.
  3. Robinson, A. H.,(2009): Elements of Cartography (6th Edition), John Wiley and Sons, New York.
  4. Sarkar, A.,(2015):Practical geography: A systematic approach, Orient Black Swan Private Ltd., New Delhi
  5. Sharma, J. P., (2010): Prayogic Bhugol(Hindi), Rastogi Publishers, Meerut.
  6. Singh, R.L. and Singh R.P.B.,(1999): Elements of Practical Geography, Kalyani Publishers, New Delhi.
  7. Singh, R.L. &Dutta, P.K., (2012):Prayogatmak Bhugol(Hindi), Central Book Depot, Allahabad
  8. Singh, R.L.,& Singh, Rana. P.B.,(1991):Prayogtmak Bhugol ke Mool Tatva (Hindi), Kalyani Publishers, New Delhi
  9. Steers, J.A. (1970): An Introduction to the Study of Map Projections, University of London Press, London.
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COURSES OF STUDY FOR **INTRODUCTORY/ MINOR ELECTIVE** FYUGP IN  
**“GEOGRAPHY”**

**SEMESTER I/ II/ III                      INTRODUCTORY REGULAR COURSE                      1 Paper**

**I.            INTRODUCTORY REGULAR COURSE (IRC)**

(Credits: Theory-02, Practicals-01)

- All Four Introductory & Minor Papers of Geography to be studied by the Students of **Other than Geography Honours.**
- Students of **Geography Honours** must Refer Content from the **Syllabus of Opted Introductory & Minor Elective Subject.**

**Marks: 15 (5 Attd. + 10 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75**

**Pass Marks: Th (SIE + ESE) = 30**

***Instruction to Question Setter for***

***Semester Internal Examination (SIE 10+5=15 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Group B will contain descriptive type two questions of five marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 60 marks):***

*There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks. Group B will contain descriptive type five questions of fifteen marks each, out of which any three are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

**INTRODUCTORY GEOGRAPHY**

**Theory: 30 Lectures**

**Course Content:**

1. Origin of the Earth, Interior structure of the earth, Earthquake and volcanoes
2. Evolution of landforms- Fluvial, glacial, Aeolian, coastal
3. Structure and composition of atmosphere, pressure belt and planetary winds and climatic regions
4. Distribution of human races, religion, language
5. Distribution, density, and growth of World population

**Reference Books;**

1. Bloom, A. L., (2003): Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi.
2. Bridges, E. M., (1990): World Geomorphology, Cambridge University Press, Cambridge.
3. Christopherson, R. W. and Birkeland, G. H., (2012) Geosystems: An Introduction to Physical Geography (8th edition), Pearson Education, New Jersey.
4. Das Gupta, A and Kapoor, A.N., (2001) Principles of Physical Geography, S.C. Chand & Company Ltd. New Delhi.

**GEOGRAPHY PRACTICAL- IRC LAB:****Marks : Pr (ESE: 3Hrs) =25****Pass Marks: Pr (ESE) = 10*****Instruction to Question Setter for******End Semester Examination (ESE):***

*There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:*

<i>Experiment</i>	<i>= 15 marks</i>
<i>Practical record notebook</i>	<i>= 05 marks</i>
<i>Viva-voce</i>	<i>= 05 marks</i>

**TOOLS AND TECHNIQUES OF GEOGRAPHY:****60 Lectures**

Scale- simple linear scale and RF

Study of Topographical Maps- Conventional signs and Interpretation (one each- hilly/plain area)

**Practical Record:**

A Project File comprising one exercise each, on scale and interpretation of topographic sheet

**Reference Books;**

1. Anson, R., and Ormelling F. J., (1994): International Cartographic Association: Basic Cartographic, Vol.Pregmen Press.
  2. Singh, Gopal., (1998): Map Work and Practical Geography (4th Edition), Vikas Publishing House, Ahmedabad.
  3. Gupta, K.K. and Tyagi V.C., (1992): Working with Map, Survey of India, DST, New Delhi.
  4. Kraak, M.J., (2010):Cartography: Visualization of Geospatial Data (3rd edition), Pearson Education Ltd., London.
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