UNIVERSITY OF JAMMU

(NAAC ACCREDITED 'A' GRADE' UNIVERSITY)
(Baba Sahib Ambedkar Road, Jammu-180006 (J&K)

Academic Section
Email: academicsectionju14@gmail.com

NOTIFICATION
(24/July/Adp./63)

It is hereby notified for the information of all concerned that the Vice-Chancellor, in anticipation of the approval of the Academic Council, is pleased to authorize the adoption of the revised Syllabi and Courses of Studies of the subject of **Geography** of Master Degree Programme of Semester **I and II (as given in the annexure)** for the examinations to be held in the years as per the details given below:

Subject	Semester	Course No	for the examination to be held in the years	% of Change
Geography	Semester- I	PSGETC101	December 2024, 2025 and 2026	5%
		PSGETC102	December 2024, 2025 and 2026	No Change
		PSGETC103	December 2024, 2025 and 2026	12%
		PSGETC104	December 2024, 2025 and 2026	No Change
		PSGELC105	December 2024, 2025 and 2026	5%
		PSGELC106	December 2024, 2025 and 2026	No Change
	Semester-II	PSGETC201	May 2025, 2026 and 2027	5%
		PSGETC202	May 2025, 2026 and 2027	No Change
		PSGETC203	May 2025, 2026 and 2027	5%
		PSGETC204	May 2025, 2026 and 2027	25%
		PSGELC205	May 2025, 2026 and 2027	No Change
		PSGELC206	May 2025, 2026 and 2027	No Change

The Syllabi of the courses is also available on the University website: www.jammuuniversity.ac.in.

Sd/-
DEAN ACADEMIC AFFAIRS

No. F. Acd/II/24/ 8804-07
Dated: 14/8/24
Copy for information and necessary action to:

1. Dean, Faculty of Science
2. Convener, Board of Studies in **Geography**
3. Programmer, Computer Section, Examination Wing
4. Incharge, University Website for Uploading of the notification.

Sumitra Sharma 14/8/24
Deputy Registrar (Academic)

14/8/24 14/8/24

UNIVERSITY OF JAMMU

NEW COURSE STRUCTURE FOR MASTERS DEGREE PROGRAMME IN GEOGRAPHY

The following Courses of Study are prescribed for 1st & IInd Semesters for Masters Degree Programme under CBCS in the subject Geography for the examinations to be conducted for the year 2024 to 2027.

Semester-1st

Course Code	Title	Credit	Nature of Course	% change
PSGETC101	GEOMORPHOLOGY	4	THEORY	5%
PSGETC102	BIOGEOGRAPHY	4	THEORY	Nil
PSGETC103	REGIONAL GEOGRAPHY OF INDIA	4	THEORY	12%
PSGETC104	POPULATION GEOGRAPHY	4	THEORY	Nil
PSGELC105	QUANTITATIVE TECHNIQUES IN GEOGRAPHY	4	LAB.	5%
PSGELC106	CARTOGRAPHY	4	LAB.	Nil

Semester-2nd

Course Code	Title	Credit		
PSGETC201	CLIMATOLOGY	4	THEORY	5%
PSGETC202	ECONOMIC GEOGRAPHY	4	THEORY	Nil
PSGETC203	HISTORY OF GEOGRAPHICAL THOUGHTS	4	THEORY	5%
PSGETC204	REGIONAL DEVELOPMENT & PLANNING	4	THEORY	25%
PSGELC205	PHYSICAL SURVEY	4	FIELD WORK & LAB.	Nil
PSGELC206	FUNDAMENTALS OF REMOTE SENSING	4	LAB.	Nil

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC101
Credit: 4
Duration of Examination: 3 hrs.

Title: Geomorphology
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Objectives:

Making the students aware about the basic concepts of Geomorphology and background knowledge of geology. Understanding the crustal mobility and tectonics with special emphasis on their role in landform development. Establishing the relationships between landforms, processes and underlying structure. Overview and critical appraisal of landform development.

Exploring how landforms and geomorphic processes vary under different climatic regimes.

Develop understanding of fluvial, glacial, Karst and Marine geomorphic processes together with emphasis upon the applied aspect of geomorphology and hazard management.

		Contract Hours
Unit-I		
1.1.	Fundamental concepts in Geomorphology	(3)
1.2.	Development of Geomorphic Thought: Classical and Modern, Catastrophism and Uniformitarianism	(3)
1.3.	Geosynclines and Mountain Building (Kober and Holmes)	(3)
1.4.	Geomorphic Ideas of Davis and Penck	(3)
Unit-II		
2.1.	Concept of Isostasy	(3)
2.2.	Continental Drift Theory	(3)
2.3.	Plate Tectonic Theory	(3)
2.4.	Topographic expressions of fault and folded structure	(3)
Unit-III		
3.1.	Weathering and Mass Movement	(3)
3.2.	Types of Stream and Drainage Patterns	(3)
3.3.	Dynamics of Fluvial and Marine processes and resulting landforms	(3)
3.4.	Dynamics of Glacial and Aeolian processes and resulting landforms	(3)
Unit-IV		
4.1.	Climate change: Impacts on geomorphic processes and landforms	(3)
4.2.	Geomorphic processes and Soil formation	(3)
4.3.	Geomorphology and hazard management	(3)
4.4.	Application of Geomorphology in Urbanization and Mineral Exploration	(3)

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC101
Credit: 4
Duration of Examination: 3 hrs.

Title: Geomorphology
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note: Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% weightage (marks)
Minor Test-I after 30 days	Upto 25%	1 hour	20%
Minor Test-II after 60 days	26% to 50%	1 hour	20%
Major Test	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.
(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.
(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Chorley, R.J., Spatial Analysis in Geomorphology, Methuen, London, 10972.
2. Cooke, R.U. and Doornkamp J.C., Geomorphology in Environmental Management: an Introduction, Clarendon Press, Oxford, 1974.
3. Dury, G.H., The Face of Earth, Penduin Harmondsworth, 1959.
4. Fairbridge, R.W., Encyclopedia of Geomorphology, New York, 1968.
5. Goudie, A., The Nature of the Environment, Oxford and Blackwell, London, 1993.
6. Gerner, H.F., the origin of Landscape: A Synthesis of Geomorphology, Oxford University Press, London 1974.
7. Mitchell, C.W., Terrain Evaluation, Longman, London, 1973.
8. Ollier, C.D., Weathering, Longman, London, 1979.
9. Pitty, A.F., Introduction to Geomorphology, Methuen, London, 1971.
10. Stoddart, D.R., (ed): Process and Form in Geomorphology, Routledge, New York, 1996.
11. Skinner, B.J. and Porter, S.C., the Dynamic Earth, John Wiley, New York, 1995.
12. Sparks, B.W., Geomorphology, Longman, London, 1960.
13. Sharma, H.S., (ed): Perspectives in Geomorphology, Concept, New Delhi, 1980.
14. Singh, S., Geomorphology, Prayag Publication, Allahabad, 1998.
15. Thornbury, W.E., Principles of Geomorphology, John Wiley, New York, 1960.

UNIVERSITY OF JAMMU

M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC102
Credit: 4
Duration of Examination: 3 hrs.

Title: Biogeography
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Objective:
The objective of this course is to understand the role of historical factor in shaping biodiversity and to develop predictive capacities for gauging biodiversity in rapidly changing world. It also helps in understanding the abiotic and biotic factors governing species diversity across space through time.

		Contract Hours
Unit-I		
1.1	Nature, Scope, Significance and Development of Bio-Geography.	(3)
1.2	Biosphere: World of living things including plant and animal life.	(3)
1.3	Bio-Geographical cycles: Carbon, Oxygen and Hydrological cycle.	(3)
1.4	Concept of Ecosystem (Mountain and Aquatic Ecosystem).	(3)
Unit-II		
2.1	Evolution of life, Lamark and Darwin's Theory.	(3)
2.2	Factors influencing growth and distribution of plants in the world.	(3)
2.3	Phytogeography of the world: Tropical Rainforests and Temperate Deciduous forests.	(3)
2.4	Plant Succession: Meaning and concept of primary and secondary successions With examples.	(3)
Unit-III		
3.1	Plant and their Classification, Taxonomic Classification, Ecological Classification, Raunkiaer's and Grime's Classification.	(3)
3.2	Evolution, Dispersal and Migration of animals.	(3)
3.3	Zoogeographical realms of the world	(3)
3.4	Remote Sensing in Bio-Geography.	(3)
Unit-IV		
4.1	National Parks, Wild life Sanctuaries and Bio serves in India	(3)
4.2	National Forest Policy of India.	(3)
4.3	Human Impact on Natural Ecosystem.	(3)
4.4	Conservation measures of Biosphere Reserve.	(3)

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC102
Credit: 4
Duration of Examination: 3 hrs.

Title: Biogeography
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% weightage (marks)
Minor Test-I after 30 days	Upto 25%	1 hour	20%
Minor Test-II after 60 days	26% to 50%	1 hour	20%
Major Test	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.

(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.

(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Agarwal, D.P.Man and Environment in India Through Ages, Brooks and Brooks, 1992.
2. Ambasht, R.S. Olant Econogy, Students, Friends and Co., Landa: Varanasi-5, 1987.
3. Chapman, J.L. and Reiss, M.J. Ecology, London: Cambridge University Press, 1997.
4. Cox, C.D. and Moore, P.D., Biogeography: An Ecology and Evolutionary approach, 5th Edn. Blackwell, 1993.
5. Hagget, R.J. Fundamentals of Biogeography, Routledge, U.S.A. 1998.
6. Hoyt J.B. Man and Earth Prentice Hall, U.S.A. 1992.
7. Illies, J.Introduction to Zoogeography, McMillan, London, 1974.
8. Khoshoo, T.N. and Sharma, M.(eds), Indian Geosphere-biosphere, Har-Anand Publication, Delhi, 1991.
9. Kormody, E.J. Concepts of Ecology, Puyblished by Asoke K. Ghosh, New Delhi, India, 2000.
10. Lapedes, D.N.Ed. Encyclopedia of Environment Science, London: McGraw Hill, 1974.
11. Mathur, H.S. Essentials of Biogeography, Anju Printers, Jaipur, 1998.
12. Pears, II, Basic Biogeography, 2nd edn, Longman, London, 1974.
13. Robinson. H.Biogeography, London: the English Language Book Service, 1978.
14. Simmon, I.G. Biogeography, Natural and Cultural Longman, London, 1974.
15. Singh Savindra, Environmental Geography, Allahabad Prayag Pustak Bhawan, 1991.
16. Singh Savindra, Physical Geography, Published by Prayag Pustak Bhawan, Allahabad, 2012.
17. Smith Robert and Smith Thomas, Elements of Ecology, Published by Benjamin/Cummings Science, Publishing, San Frascisco, 1998.
18. Tivy, J. Biogeography: A Study of Plants in Ecosphere, 3rd Edn. Olivers and Boyd, U.S.A. 1992.
19. Tiwari, S.K. Geographic Biogeography, Published by Sarup and Sons, Ansari Road, New Delhi, India, 2007.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC103
Credit: 4
Duration of Examination: 3 hrs.

Title: Regional Geography of India
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Objectives: To provide an understanding of.

- The concept of region and regionalisation and to make them aware about drainage system, soil and vegetation types of India.
- The resource regions, multipurpose projects and population characteristics of the country.
- The agriculture, impact of the green revolution and about the industrial development in the country.
- The geographical personality of Indo-Gangetic plains, Jammu & Kashmir, coastal regions and islands of Andaman Nicobar and Lakshadeep.

		Contract Hours
Unit-I		
1.1	Basis of Regionalization of India	(3)
1.2	The question of regional disparity and identity in India	(3)
1.3	Himalayan and Peninsular Drainage Systems of India.	(3)
1.4	Soil, Vegetation, Forest Types, their Distribution and Conservation.	(3)
Unit-II		
2.1	Resource Regions of India: Production, Reserves and Distribution of Coal, Petroleum and Hydro-Electricity.	(3)
2.2	Production and Distribution of Iron Ore, Bauxite and Mica.	(3)
2.3	Multipurpose Projects: the Damodar Valley, Bhakra Nangal and Sardar Sarovar Dam.	(3)
2.4	Distribution Growth and Density of Population with Special references to Post-Independence Period.	(3)
Unit-III		
3.1	Main Characteristics, Features and Problems of Indian Agriculture	(3)
3.2	Green Revolution and its Spatial Dimensions.	(3)
3.3	Industrial Regions and Special Economic Zones of India.	(3)
3.4	Location Pattern of Iron and Steel, and Textile Industry of India.	(3)
Unit-IV		
4.1	Regionalization of Indo-Gangetic Plain.	(3)
4.2	Regional Geography of Jammu & Kashmir.	(3)
4.3	Comparative Analysis of Eastern and Western Coastal Regions of India.	(3)
4.4	Study of India's Islands: Andaman Nicobar & Lakshadweep.	(3)

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC103
Credit: 4
Duration of Examination: 3 hrs.

Title: Regional Geography of India
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% weightage (marks)
Minor Test-I (after 30 days)	Upto 25%	1 hour	20%
Minor Test-II (after 60 days)	26% to 50%	1 hour	20%
Major Test(after 90 days)	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.
(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.
(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Center for Science and Environment (1988) State of Inda's Environment, New Delhi.
2. Chand, M. and Puri, V.K. (2000) Regional Planning in India, Allied Publishers Limited.
3. Deshpande, C.D., (1992). India's Regional Interpretation, ICSS and Northern Book Center.
4. Dreze Jean & Amartya Sen (ed) (1966). India Economic Development and Social Opportunity, Oxford University Press, New Delhi.
5. Hussain, M.(2014) Geography of India (5th Ed), McGraw Hill Education.
6. Khullar, D.R.(2011) India: A Comprehensive Geography, Kalyani Publishers.
7. Kundu, A. Raza Moonis (1982) Indian Economy – The Regional Dimension, Spectrum Publishers, New Delhi.
8. Mandal R.B. (ed) (1990) Patterns of Regional Geography – An International Perspective. Vol. 3-Indian Perspective.
9. Robinson, Fransis (1989): The Cambridge Encylopedia of India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan and Maldives, Cambridge University Press, London.
10. Sdyasuk Galina and P. Sengupta (1967): Economic Regionalization of India, Census of India.
11. Sen, Amartya (2000) Development as Freedom. Random House, Toronto.
12. Singh, R.L., (ed) (1971) India – A Region: Geography, National Geographical Society, India, Varanasi.
13. Tirtha R. & Gopal Krishna (1996) Emerging India, Reprinted by Rawat Publications, Jaipur.
14. Tirtha, Ranjit (2002), Geography of India, Rawat Publishers., Jaipur & New Delhi.
15. Tiwari, R.C. (1999) Geography of India, Prayag Publishers, Allahabad.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC104 | **Title: Population Geography**
Credit: 4 | **Max. Marks: 100**
Duration of Examination: 3 hrs. | **(a) Minor Test-I: 20**
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Objective:

The objective of this course is to understand the facts related to spatial variation in the distribution of human population and to analyse the demographic components of change like, migration, urbanization, human resources etc. for achieving sustainable-economic growth and environmental protection.

		Contract Hours
Unit-I		
1.1	Definition, Nature, Scope and Significance of Population Geography.	(3)
1.2	Sources of Population data- (census, surveys and Registrations)	(3)
1.3	Factors affecting Population distribution, Density and Growth.	(3)
1.4	Components of Population change – Mortality and fertility.	(3)
Unit-II		
2.1	Concepts of overpopulation, under population and optimum population.	(3)
2.2	India and World: Urbanization literacy patterns.	(3)
2.3	India and World: Age and Sex composition of population.	(3)
2.4	India and World: Occupational Structure and educational levels	(3)
Unit-III		
3.1	The Demographic Transition: Theory	(3)
3.2	Migrations: Types, Causes and Consequences.	(3)
3.3	Population Problems of under Developed and Advanced Countries.	(3)
3.4	Population Resource Regions of the World.	(3)
Unit-IV		
4.1	Theories of Population – Malthus, Marx.	(3)
4.2	Definition, Types and Objectives of the Population Policies.	(3)
4.3	Population Policy of India.	(3)
4.4	Population Policy of China.	(3)

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGETC104
Credit: 4
Duration of Examination: 3 hrs.

Title: Population Geography
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% weightage (marks)
Minor Test-I after 30 days	Upto 25%	1 hour	20%
Minor Test-II after 60 days	26% to 50%	1 hour	20%
Major Test	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.
(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.
(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Barrett, Hazel R., Population Geography: Conceptual Frameworks in Geography, Oliver and Boyd, London, 1994.
2. Bogue, D.J., Principles in Demography, John Wiley, New York, 1969.
3. Bose, Ashish et al., Population in India's Development (1947-2000), Vishal Publishing House, New Delhi, 1974.
4. Census of India, India: A State Profile, 1991.
5. Chandna, R.C., Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi, 2000.
6. Clarke, John 1, Population Geography, Pergamon Press, Oxford, 1973.
7. Crook, Nigel, Principles of Population and Development, Pergamon Press, New York, 1997.
8. Garnier, B.J. Geography of Population, Longman, London, 1970.
9. Mitra, Asok, India's Population: Aspects of Quality and Control. Vol. I and II, Abhinar Publications, New Delhi, 1978.
10. UNdp: Human Development Report, Oxford University Press, Oxford 2000.
11. Woods, R., Population Analysis in Geography, Longman, London, 1979.
12. Zelinsky Wilbur, A Prologue to Population Geography, Prentice Hall, 1966.
13. Izhar Hassan, Mohammad, "Population Geography" Rawat Publications, New Delhi, 2009.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGELC105 **Title: Quantitative Techniques in Geography**
Credit: 4 **Max. Marks: 100**
Duration of Examination: 3 hrs. **(a) Internal: 50**
(b) External:50

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Objective:

The objective of this course is to overlay descriptive aspect of geography for developing scientific approach by quantifying man environment relationship. It helps to measure reality and deviation of spatial patterns and distribution.

UNIT-1

1.1 Evolution and Significance of Statistical Methods in Geography
1.2 Sources, methods and tabulation of data
1.3 Graphic representation, Frequency Polygon, Frequency Curve and Ogive

UNIT-II

2.1 Correlation Analysis : Scatter Diagram
2.2 Karl Pearson's Product Moment and Spearman's Rank Correlation
2.3 Test of Significance on Correlation

UNIT-III

3.1 Simple Linear Regression
3.2 Chi square test
3.3 Coefficient of Determination

UNIT-IV

4.1 Time series Analysis of Trends
4.2 Sampling, Types of Sampling, sampling units and designs
4.3 Lorenz Curve and Gini coefficient

UNIVERSITY OF JAMMU

M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGELC105 **Title: Quantitative Techniques in Geography**

Credit: 4 **Max. Marks: 100**

Duration of Examination: 3 hrs. **(a) Internal: 50**

(b) External:50

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

1	Internal	Break up of marks
(i)	Daily Evaluation of Practical Record	20
(ii)	Attendance	10
(iii)	Test+Viva-Voce+Practical Records (10+5+5)	20
2	External	
(i)	Test	36
(ii)	Viva	9
(iii)	Practical record	5
	Total	100

Suggested Readings:

1. David Unwin, Introductory Spatial Analysis, Methuen, London, 1981.
2. Gregory S., Statistical Methods and the Geographer, Longman, London, 1978.
3. Hammond R., and P.S. McCullagh, Quantitative Techniques in Geography: An Introduction, Clarendan Press, Oxford, 1974.
4. John, Pcole and Cuchlaine A.M. King, Quantitative Geography, John Wiley, London, 1973.
5. Johnson, R.J., Multivibrate Statistical Analysis in Geography, Longman London, 1973.
6. Maurice Yeats, An Introduction to Quantitative Analysis in Himan Geography, McGraw Hill, New York, 1974.
7. Peter, Hagget, Andrew D. Cliff and Allan Frey, Location Methods Vol. 1 and II, Edward Arnold, London, 1977.
8. Aslam Mahmood, Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGELC106
Credit: 4
Duration of Examination: 3 hrs.

Title: Cartography
Max. Marks: 100
(a) Internal: 50
(b) External:50

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Objectives:

- The main objective of this course is to make students aware about different cartographic techniques for representation of data pertaining to physical and human landscape.
- An effort is made to help them to develop manual skills of drawing maps based on data related to physical and human aspects of Geography.
- Students are also told about choice of map projections, models and benefits of computer assisted cartography and GIS in cartography.

Unit-I — Contract Hours (12)

1. Cartography: Nature, history and recent trends.
2. Types of data and symbols.

Unit-II — (12)

1. Representation of Relief and landforms: Elementary conventional Methods and Profile, Calculation of Gradient, Methods of slope analysis.
2. Mapping of Climatic data: Temperature and Rainfall.

Unit-III — (12)

1. Representation of Population data.
2. Representation of Agriculture data.

Unit-IV — (12)

1. Computer Assisted Cartography, Relation between Conventional Cartography, Computer Assisted Cartography and GIS.
2. Choice of Projections. Preparation of Spatial Models in Cartography and planning.

Note for paper setter:

1	**Internal**	**Break up of marks**
(i)	Daily Evaluation of Practical Record	20
(ii)	Attendance	10
(iii)	Test+Viva-Voce+Practical Records (10+5+5)	20
2	**External**	
(i)	Test	36
(ii)	Viva	9
(iii)	Practical record	5
	Total	**100**

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 1ST SEMESTER

Course Code: PSGELC106
Credit: 4
Duration of Examination: 3 hrs.

Title: Cartography
Max. Marks: 100
(a) Internal: 50
(b) External:50

Note : Detailed syllabus for examination to be held in December 2024, 2025 & 2026.

Suggested Readings:

1. Birch, T: Maps, Topographical and Statistical, Clarendon Press, Oxford, 1949.
2. Bolstad, P: GIS Fundamentals: A First Text on Geographic Information Systems, Second Edition, White Bear Lake, MN: Eider Press, 2005.
3. Brown, L.A.: The Story of Maps. Cressit Press, London. 1951.
4. Crampton. W.C.: Mapping: A Critical Introduction to Cartography and GIS, John Willy & Sons, New York, 2010.
5. Gregory, S: Statistical Methods and Geographer, Longmans, London. 1963.
6. Harvey. Francis: A Primer of GIS, Fundamental Geographic and Cartographic Concepts, The Guilford Press, 31 pp., 2008.
7. Heywood, I, Cornelius, S., and Carver, S.: An Introduction to Geographical Information Systems. Prentice Hall, 32rd Edition, 2006.
8. John Krygier and Denis Wood: Making Maps: A Visual Guide to Map Design for GIS. Guilform Publications, 2013.
9. Keates, J.S.: Cartographic Design and Production, Longman, London, 1998.
10. Misra, R.P. and Ramesh, A: Fundamental of Cartography. Concept Publishing Company, New Delhi, 1989.
11. Monkhouse, F.J: Maps and Diagrams, Methuen and Co., London, 1994.
12. Raisz, Erwin: Principles of Cartography, McGraw Hill, New York, 1962.
13. Robinson, A.H. and Others: Elements of Cartography, John Willy and Sons, New York, 6th Edition, 1992.
14. Singh, R.L. and Singh, R.P.B: Elements of Practical Geography, Kalyani Publishers, New Delhi, Reprint 2002.
15. Tamaskar, BG and Deshmukh, V.M.: Geographical Interpretation of Indian Topographical Maps, Orient Longman Ltd., New Delhi, 1974.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC201
Credit: 4
Duration of Examination: 3 hrs.

Title: Climatology
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note: Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Objective:

The objective of this course is to study the unique characteristics of atmospheric conditions in controlling climate, origin, types, causes and processes influencing the climatic variation and their impact on humans' vice-versa.

		Contract Hours
Unit-I		
1.1	Nature and Scope of Climatology and its relationship with Meteorology.	(3)
1.2	Composition and the structure of atmosphere.	(3)
1.3	Insolation, Heat balance of the earth.	(3)
1.4	Atmosphere moisture and precipitation.	(3)
Unit-II		
2.1	Tropical, temperate and high latitude weather systems.	(3)
2.2	Concept of air masses and atmospheric disturbances.	(3)
2.3	Ocean interaction – El Nino-Southern Oscillation (ENSO) and La Nina.	(3)
2.4	Climate of India and its controls: Monsoon and Western disturbances.	(3)
Unit-III		
3.1	Climatic classification of Koppen's.	(3)
3.2	Climatic classification of Thornwaite.	(3)
3.3	Modified Koppen's classification as proposed by Trewartha.	(3)
3.4	Major climates of the World-tropical, temperate, desert and mountain climate.	(3)
Unit-IV		
4.1	Climate and Soil.	(3)
4.2	Climate and agriculture.	(3)
4.3	Climate and house types as well as human health.	(3)
4.4	Climate and vegetation.	(3)

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC201
Credit: 4
Duration of Examination: 3 hrs.

Title: Climatology
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note: Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% Weightage (marks)
Minor Test-I after 30 days	Upto 25%	1 hour	20%
Minor Test-II after 60 days	26% to 50%	1 hour	20%
Major Test	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.
(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.
(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Barry, R.G. and Chorley P.J.: Atmosphere, Weather and Climate, Routledge, London and New York, 1998.
2. Critchfield, J.H.: General Climatology, Prentice Hall, India, New Delhi, 1993.
3. Das, P.K., Monsoons, National Book Trust, New Delhi, 1987.
4. Fein, J.S. and Stephens, P.N., Monsoons, Wiley Inter Science, 1987.
5. India met. Deptt. : Climatological Tables of Observatories in India, Govt. of India, 1968.
6. Lal, D.S.: Climatology, Chitanya Publications, Allahabad, 1986.
7. Lydolph, P.E.: The Climate of the Earth, Rowman, 1985.
8. Menon, P.A.: Our Weather, N.B.T., New Delhi, 1989.
9. Peterson, S.: Introduction to Meteorology, Mc Graw Hill Book, London, 1969.
10. Robinson, R.D. and Perry, A (ed): Applied Climatology, Principles and Practice, Routledge, London.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC202
Credit: 4
Duration of Examination: 3 hrs.

Title: Economic Geography
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Objective:

The objectives of this course are to integrate the various factors of economic development and acquaint the students about the dynamic aspects of Economic geography. To familiarise the students about the role of agriculture in the economic development of the country. To familiarize the students to understand the location of major manufacturing activities with the support of various industrial location theories and models. To evaluate the changing industrial scenario due to Globalization and its impact on Indian economy with the economies of global trade.

		Contract Hours
Unit I		
1.1.	Meaning, Content and Recent trends in Economic Geography	(3)
1.2.	Relation of Economic Geography with Economics and Commercial Geography	(3)
1.3.	Approaches to the study of Economic Geography	(3)
1.4.	Classification of Economies	(3)
Unit II		
2.1.	Factors of location of Economic Activities	(3)
2.2.	Types of Economic activities	(3)
3.3.	World major Agricultural Types: Whitlessey Classification	(3)
3.4.	Von Thunen Model with special reference to Economic Rent	(3)
Unit III		
3.1.	Classification of Industries	(3)
3.2.	Theories of Industrial location: Weber and Losch	(3)
3.3.	Christaller Central Place Theory	(3)
3.4.	Typology of Markets	(3)
Unit IV		
4.1.	Mode of Transportation Cost, Accessibility and Connectivity	(3)
4.2.	Economic Development of India and Regional Disparities	(3)
4.3	Impact of Green Revolution on Indian Economy	(3)
4.4.	Globalization and its impact on Indian Economy	(3)

UNIVERSITY OF JAMMU

M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC202 | **Title: Economic Geography**

Credit: 4 | **Max. Marks: 100**

Duration of Examination: 3 hrs.

(a) Minor Test-I: 20

(b) Minor Test-II:20

(c) Major Test: 60

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% weightage (marks)
Minor Test-I after 30 days	Upto 25%	1 hour	20%
Minor Test-II after 60 days	26% to 50%	1 hour	20%
Major Test	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.

(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.

(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Berry J.L., Geography of Market Centers and Retail Distribution, Prentice Hall, New York, 1967.
2. Chatterjee, S.P. Economic Geography of Asia, Allied Book Agency, Calcutta, 1984.
3. Chorley, R.J. and Haggett, P(ed), Network Analysis in Geography, Arnold, 1969.
4. Dreze, J. and Sen, A. India- Economic Development and Social Opportunity, Oxford Unviersity Press, New Delhi, 1996.
5. Exkarsley, R(ed): Markets, The State and the Environment, McMillan, London, 1995.
6. Garnier, B.J. and Delobez, A Geography of Marketing, Longman, London, 1979.
7. Hamilton, F.E.I.: Spatial Perspectives on Industrial Organization and Decision Making. John Wiley, New York, 1974.
8. Hamilton, I. (ed): Resources and Industry, Oxform University Press, New York, 1992.
9. Hurst, E: Transport Geography-Comments and Readings, McGraw Hill, New York, 1974.
10. Morgan, W.B. and Muntaon, R.J.C. Agricultural Geography, Methuen, London, 1977.
11. Pachuri, R.K. Energyand., Economic Development in India, Praeger, New York, 1977.
12. Robertson, D.(ed): Globalization and Environment, E.Elgar Co., U.K. 2001.
13. Rostow, W.W.: The Stages of Economic Growth, Cambridge University Press, London, 1960.
14. Singh, J. and Dhillon, S.S., Agricultural Geography, McGraw Hill, India, New Delhi, 1984.
15. Symons L.Agricultural Geography, Bell and Sons, London, 1972.
16. Wheeler, J.O. et al. Economic Geography, John Wiley, New York, 1995.
17. K.K. Khanna, Economic and Commercial Geography, 23, Daryagang, New Delhi.
18. Prithwish Roy, Economic Geography: A Study of Resources, New Central Book Agency, Calcutta-700009.
19. K.Siddhartha, Economic Geography (Theories, processes and patterns) Kisalaya Publication Pvt. Ltd. Patna-13.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC203 | **Title: History of Geographical Thought**

Credit: 4 | **Max. Marks: 100**

Duration of Examination: 3 hrs.

(a) Minor Test-I: 20

(b) Minor Test-II:20

(c) Major Test: 60

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Objective:

The objective of this course is to understand the history and philosophy of geography, their general characteristics during ancient, medieval and modern periods, their origin, development and reconciling different vision of realities pertaining to areal differentiation, spatial organizations and different dichotomies.

Unit-I

		Contract Hours
1.1	General Character of Geography in the Ancient Period-Contribution Of Herodotus, Eratosthenes, Strabo and Ptolemy.	(3)
1.2	Contribution of Indian Scholars.	(3)
1.3	Concept of Geography in the Medieval Period-Dark Age for Science.	(3)
1.4	Arab Geographers.	(3)

Unit-II

2.1	Beginning of Modern Geography – Verenius, Cluverius and Kant.	(3)
2.2	Contributions of Humboldt and Ritter.	(3)
2.3	Development of Geography in Europe during the second half of the 19th Century And first half of the 20th Century.	(3)
2.4	Darwin's impact on Geography.	(3)

Unit-III

3.1	Schools of Geography – French and British	(3)
3.2	Growth and Development of Dualism between Physical and Human Geography, Systematic and Regional Geography.	(3)
3.3	Determinism and Posssibilism.	(3)
3.4	Different Concepts of Geography:	(3)
	(a) Study of Relationships	
	(b) Environmental Determinism	
	(c) Human Ecology	

Unit-IV

4.1	Geography as a Science of Distributions and as a science of areal differentiation.	(3)
4.2	Quantitative Revolution in Geography.	(3)
4.3	Models in Geography.(Significance and Types)	(3)
4.4	Modern Themes in Geographical Thought. (Radicalism, Postmodernism and Feminism)	(3)

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC203
Credit: 4
Duration of Examination: 3 hrs.

Title: History of Geographical Thought
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% weightage (marks)
Minor Test-I after 30 days	Upto 25%	1 hour	20%
Minor Test-II after 60 days	26% to 50%	1 hour	20%
Major Test	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.
(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.
(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Alber, Ronald: Adams, John S. Gould, Peter: Spatial Organization: The Geographer's View of the World, Prentice Hall, N.J., 1971.
2. Ali, S.M.: The Geography of Puranas, Peoples Publishing House, Delhi, 1966.
3. Amedeo, Douglas: An Introduction to Scientific Reasoning inGeography, John Wiley, U.S.A., 1971.
4. Dikshit, R.D.(ed): the Art & Science of Geography Integrated Readings, Prentice Hall of India, New Delhi, 1994.
5. Hartshorne, R.Perspectives on Nature of Geography, Rand McNally and Co., 1959.
6. Hussain, M.Evolution of Geographic Thought, Rawat Pub., Jaipur, 1984.
7. Johnston, R.J. Philosophy and Human Geography. Edward Arnold, London, 1983.
8. Johnston, R.J. the Future of Geography, Metheun, London, 1988.
9. Minshull, R.: The Changing Nature of Geography. Hutchinson Univesity Library, London, 1970.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC204 **Title: Regional Development& Planning**
Credit: 4 **Max. Marks: 100**
Duration of Examination: 3 hrs. **(a) Minor Test-I: 20**
(b) Minor Test-II:20
(c) Major Test: 60

Note: Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Objectives: Regional Planning is multidisciplinary approach aims at holistic development of a region. The objective of the Regional Planning &Development Program is to stimulate a systematic approach for addressing and resolving the physical, economic, and social problems of a regions. The design of the course focus on the exploration and resolution of planning issues from the point of view of community interests, emphasizing the promotion of equitable and economical use of natural and human resources to improve the quality of life.

Unit-I		**Contract Hours**
1.1	Concept and Definition of region and Regional Planning.	(3)
1.2	Evolution and types of Regional Planning	(3)
1.3	Merits and limitations for application to regional planning.	(3)
1.4	Types of Regions	(3)
Unit-II		
2.1	Theories and models of regional development	(3)
2.2	Growth Pole model	(3)
2.3	Rostow 's model	(3)
2.4	Cumulative Causation model	(3)
Unit-III		
3.1	Tribal Area development plan	(3)
3.2	Hilly Area development plan	(3)
3.3	Desert, Drought prone and Backward area development plan	(3)
3.4	Niti Ayog: Aims and Objectives	(3)
Unit-IV		
4.1	Concept of Growth and Development	(3)
4.2	Indicators of Development (social, economic and happiness index)	(3)
4.3	Measurement of Regional Development	(3)
4.4	Regional Imbalances in India – Agricultural, Industrial and Rural- Urban	(3)

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGETC204
Credit: 4
Duration of Examination: 3 hrs.

Title: Regional Planning & Development
Max. Marks: 100
(a) Minor Test-I: 20
(b) Minor Test-II:20
(c) Major Test: 60

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Note for Paper Setters

	Syllabus to be covered in exam.	Time allowed for exam.	% weightage (marks)
Minor Test-I after 30 days	Upto 25%	1 hour	20%
Minor Test-II after 60 days	26% to 50%	1 hour	20%
Major Test	50% to 100%	3 hours	60%

(i) The major test will have 7 questions and the candidate has to attempt at least 4 questions. Each question carries 15 marks.
(ii) Question No.1 will be compulsory comprised of 5 short answer type question spread over entire syllabus. Each question carries 3 marks.
(iii) The remaining six questions will be from 50% syllabus and candidate will have to attempt any three of them.

Suggested Readings:

1. Abler, R.et. al., Spatial Organization: The Geographer's View of the World, Prentice Hall, Englewood Cliffs, N.J., 1971.
2. Bhat, L.S. Regional Planning in India, Statistical Publishing society, Calcutta, 1973.
3. Bhat, L.S. et. Al. : Micro-Level Planning: A Case study of Karnal Area, Haryana, K.B., Publications, New Delhi, 1976.
4. Chorley, R.J. and Hagget, : Models in Geography, Methuen, London, 1967.
5. Christaller, W.: Central Places in Southern Germany, Translated by C.W. Baskin, Prentice Hall, Englewood Cliffs, New Jersey, 1966.
6. Friedmann, J. and Alonso, W.: Regional Development Policy-A Case Study of Venezuela, M.I.T. Press Cambridge, Mass, 1966.
7. Friedmann, J. and Alonso, W.: Regional Development and Planning A. Reader, M.I.T. Press, Cambridge, Mass 1967.
8. Glikson, Arthur: Regional Planning and Development, Netherlands Universities foundation for International Co-operation, London, 1955.
9. Gosal, G.S. and Krishan, G: Regional Disparities in Levels of Socio-Economic Development in Punjab, Vishal Publications, Kurukshetra, 1984.
10. Government of India, Planning Commission: Third Five Year Plan, Chapter on Regional Imbalances in Development, New Delhi, 1961.
11. Indian Councl of Social Science Research: Survey of Research in Geography, Popular Prakashan, Bombay, 1972.
12. Johnson, E.A.J.: The Organization of Space in Developing Countries, Harvard University Press, Cambridge, 1970.
13. Kuklinski, A.R.(ed): Growth Poles and Growth Centres in Regional Planning, Mounton, The Hague, 1972.
14. Kundu, A and Raza, Moonis: Indian Economy-The Regional Dimension, Spectrum Publishers, New Delhi, 1982.
15. Losch, A: The Economics of Location, University Press, Yakle, New Haven, 1954.
16. Misra, R.P.: Regional Planning: Concepts, Techniques and Policies, University of Mysore, Mysore, 1969.
17. Misra, R.P. and others (editors): Regional Development Planning in India-A Strategy, Institute of Development Studies, Mysore, 1974.
18. Mitra, A.: Levels of Regional Development, Census of India, Vol.I, Part-IA(I) and (ii) New Delhi, 1965.

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGELC205
Credit: 4
Duration of Examination: 3 hrs.

Title: Physical Survey
Max. Marks: 100
(a) Internal: 50
(b) External:50

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Objectives:

- The main objective of this course is to make students familiar with the physical landscape.
- An effort is made to help them to identify different landforms while in the field and to map those landforms by using different cartographic techniques.
- Students are also told about the use of field instruments such as Dumpy Level, Theodolite/ Total Station in geographical studies.

Unit-I — **Contract Hours**

Tract the prominent features of the area to be surveyed. Identify salient landform features of the selected area on the topographical sheet. (12)

Unit-II

Identify the landforms on the surface, while in the field. Also note the agents of erosion transportation and deposition associated with the landforms. (12)

Unit-III

Field Instrument Survey: Scope, purpose and application of Survey. Introduction, advantages, disadvantages and procedure of Dumpy level and Theodolite/ Total station. (12)

Unit-IV

Based on observations and data collected in the field write a report and prepare sheets for the data recorded with the help of instruments. (12)

Note for Paper Setters:

1	**Internal**	**Break up of marks**
(i)	Subject Matter	10
(ii)	Methodology	10
(iii)	Attendance	10
(iv)	Presentation	10
(v)	Viva Voce	10
2	**External**	
(i)	Practical Record/ Report	30
(ii)	Viva Voce	20
	Total:	**100**

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGELC205
Credit: 4
Duration of Examination: 3 hrs.

Title: Physical Survey
Max. Marks: 100
(a) Internal: 50
(b) External:50

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Suggested Readings:

1. Machumu, H. understanding Practical Geography: Map Work-Surveying-Fieldwork, GRIN Verlag, 2011.
2. Indian Council of Social Science Research.
3. T.P. Kanctkar and S.V. Kulkarrni, Surveying and leveling, Pune Vidyathi Griha Prakashan.
4. Zamir Ali (1994) "A Text Book of Surveying Vikas Publishing House Pvt. Ltd., New Delhi.
5. R.L. Singh and Rana P.S. Singh (2004) "Elements of Practical Geography", Kalyani Publishers, New Delhi.
6. Ashis Sarkar (2009), "Practical Geography – A Systematic Approach", Orient Blakswo Private Limited, Kolkata.
7. B.C. Punnia, Ashok Kumar Jain and Arun Kumar Jain (1993), "Surveying" Laxmi Publications, New Delhi.
8. Gopal Singh (2004), "Map Work and Practical Geography", Vikas Publishing House Pvt. Ltd. Delhi.

UNIVERSITY OF JAMMU

M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGELC206 **Title: Fundamentals of Remote Sensing**

Credit: 4 **Max. Marks: 100**

Duration of Examination: 3 hrs. **(a) Internal: 50**

(b) External:50

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Objectives of Remote Sensing

The objective of the course is to introduce to the students the basic principles of remote sensing and the methods of digital interpretations of satellite images. To provide exposure to students in gaining knowledge on concepts and applications leading to modeling of earth resources management using Remote Sensing. To acquire skills in storing, managing digital data for planning and development. Geospatial analysis is a growing field of employment. The role includes analysis of data, design and use of this database. The work of a geospatial analyst varies greatly depending on which sector the student wants to work.

		Contract Hours
Unit-I		
1.1	Remote Sensing meaning, definition, significance and utility.	3
1.2	History and development of Remote Sensing.	3
1.3	Advantages and limitations of Remote Sensing.	3
1.4	Stages of Remote Sensing and Remote Sensing Platforms.	3
Unit-II		
2.1	EMR and its properties.	3
2.2	Electromagnetic spectrum and characteristics of wavelength regions.	3
2.3	EMR Atmospheric and surface interaction.	3
2.4	Spectral Signatures.	3
Unit-III		
3.1	Aerial Photography and its geometry.	3
3.2	Relief displacement and image formation.	3
3.3	Classification of Aerial Photographs and their utility.	3
3.4	Elements of Visual Interpretation.	3
Unit-IV		
4.1	Digital Image: Pan/Multispectral imaging and colour theory.	3
4.2	Digital Image Processing – Radiometric, Geometric and Atmospheric correction.	3
4.3	Image Enhancement.	3
4.4	Image classification – Supervised and Unsupervised.	3

1	**Internal**	**Break up of marks**
(i)	Daily Evaluation of Practical Record	20
(ii)	Attendance	10
(iii)	Test+Viva-Voce+Practical Records (10+5+5)	20
2	**External**	
(i)	Test	36
(ii)	Viva	9
(iii)	Practical record	5
	Total	**100**

UNIVERSITY OF JAMMU
M.A./M.SC. GEOGRAPHY, 2nd SEMESTER

Course Code: PSGELC206
Credit: 4
Duration of Examination: 3 hrs.

Title: Fundamentals of Remote Sensing
Max. Marks: 100
(a) Internal: 50
(b) External:50

Note : Detailed syllabus for examination to be held in May 2025, 2026 & 2027.

Suggested Readings:

1. Sabins, Floyd F, 1986, Remote Sensing : Principles & Interpretation, Freeman, New York.
2. Lillesand, T.M. & Klefer, R.W. 1987, Remote Sensing and Image Interpretation, John Wiley & Sons, New York.
3. Curran, Paul J; 1985, Principles of Remote Sensing , Longman, London.
4. Estes, J.E. and L.W. Senger, 1974, Remote Sensing Techniques for Environmental Analysis, Hamilton, Santa Barbara, California.
5. Lillesand, Thomas M. and R.W. Klefer, 1987 Remote Sensing and Image Interpretation, John Wiley and Sons, New York.
6. Slater, P.N., 1980, Remote Sensing : Optics and Optical System, Addison – Wesley, Reading.
7. Jamles, B. CampBell, Introduction to Remote Sensing – 2nd Edi. Taylor & Francis, London.
8. Fazal, S. (2009), RemoteSensing Basics, Kalyani Pugblishers, New Delhi.
9. Reddy, A.(2001), Textbook of Remote Sensing and Geographical Information Systems, BS Publication Hyderabad.