

**Syllabus for
Master of Arts in Geography
Under Choice Based Credit System**

**Academic Session:
w.e.f. 2020-2023**



for
**University Post Graduate Department
Binod Bihari Mahto Koyalanchal
University, Dhanbad**

Members of Board of Studies of CBCS Post Graduate Syllabus as per Guidelines of the Binod Bihari Mahto Koyalanchal University, Dhanbad

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HOD, Department of Geography
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B.B.M.K.U., Dhanbad.
3. Expert members: i) Dr. O. P. Mahato,
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COURSE STRUCTURE

Semester Wise Examination/Course Structure for Pract. Sub. Of Science & Arts

Sem ester	Paper Code (Credit, Lectures)	Paper Name	Full Marks	End Semester Marks	Mid Semester (Internal) Marks (Written 20 marks) + Day to Day assessment includes extracurricular activities (5 marks) + Attendance (5 marks)
I	GEOG.-F-101 (5 Credits, 60 Lectures + 15 Tutorials)	History of Geographical Thoughts	100	70	30
	GEOG.-C-102 (5 Credits, 60 Lectures + 15 Tutorials)	Geomorphology	100	70	30
	GEOG.-C-103 (5 Credits, 60 Lectures + 15 Tutorials)	Climatology	100	70	30
	GEOG.-C/P-104 (5 Credits, 75x2 Lectures)	Practical	100	70	30
II	GEOG.-S-205 (5 Credits, 60 Lectures + 15 Tutorials)	Environmental Geography (Skill Enhancement Course)	100	70	30
	GEOG.-C-206 (5 Credits, 60 Lectures + 15 Tutorials)	Population Geography	100	70	30
	GEOG.-C-207 (5 Credits, 60 Lectures + 15 Tutorials)	Regional Geography: India and Jharkhand	100	70	30
	GEOG.-C/P-208 (5 Credits, 75x2 Lectures)	Practical	100	70	30
III	GEOG.-A-309 (5 Credits, 60 Lectures + 15 Tutorials)	Oceanography (Open Elective)	100	70	30
	GEOG.-C-310 (5 Credits, 60 Lectures + 15 Tutorials)	Settlement Geography	100	70	30
	GEOG.-C-311 (5 Credits, 60 Lectures + 15 Tutorials)	Regional Planning and Development (India)	100	70	30
	GEOG.-C/P-312 (5 Credits, 75x2 Lectures)	Practical	100	70	30
IV	GEOG.-E-413A/ GEOG.-E-413B/ GEOG.-E-413C (5 Credits, 60 Lectures + 15 Tutorials)	Discipline Centric Elective Theory A: Biogeography Or B: Agricultural Geography Or C: Soil Geography	100	70	30

GEOG.-E-414A/ GEOG.-E-414B/ GEOG.-E-414C (5 Credits, 60 Lectures + 15 Tutorials)	Discipline Centric Elective Theory A: Geography of Tourism and Transport Or B: Social Geography Or C: Political Geography	100	70	30
GEOG.-C/P-415 (5 Credits, 60 Lectures + 15 Tutorials) or GEOG.-E/P-415A/ GEOG.-E/P-415B/ GEOG.-E/P-415C (5 Credits, 75x2 Lectures)	Practical	100	70	30
GEOG.-D-416* (5 Credits, 150 Lectures)	Dissertation/ Project	100	70	30
Total Marks		1600	1120	480

Note: Symbol of Paper: GEOG.-F-101: The first three symbols in capital letters indicate the subject; the next symbol(s) denotes Foundation (F), Core (C), Discipline Centric Elective (E), AECC/SEC (S), etc. Out of the next three digits, the first digit indicates the semester e.g. 1,2,3,4,5,6 for semester I, II, III, IV, V, VI respectively, and the next two digits indicate paper number. The last letter T or P indicates Theory or Practical.

SEMESTER-I

GEOG -F-101	HISTORY OF GEOGRAPHICAL THOUGHTS	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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Instruction to faculty members and Question Setter for:

Mid Semester Examination (MSE):

There will be **two** groups of questions in written examinations of 20 marks. **Group A is compulsory** and will contain five questions of **multiple type questions** consisting of 1 mark each. **Group B will contain descriptive type five** questions of five marks each, out of which any three are to be answered. The Mid Semester Examination shall have three components. (a) Two Semester Internal Assessment Test (SIA) of 20 Marks each, (b) Class Attendance Score of 5 marks and (c) Day to Day & Extracurricular activities of 5 marks. **“Best of Two”** shall be applicable for computation of marks for SIA.

(Attendance Upto 75%, 1 mark; 75 < Attd. < 80, 2 marks; 80 < Attd. < 85, 3 marks; 85 < Attd. < 90, 4 marks; 90 < Attd., 5 marks).

End Semester Examination (ESE): There will be two groups of questions. Group A is compulsory and will contain two questions. Question No. 1(A) will be multiple type questions consisting of six questions of 1 mark each. Question No. 1(B) will be two short answer type of 4 marks. Group B will contain descriptive type eight questions of fourteen marks each, out of which any four are to be answered.

		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6	1(A)- 6x1=6	14

		1(B)- 2	1(B)- 2x4=8	
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course contents:

Module 1:

The field of Geography: Its place in the classification of sciences, geography as social science and natural science. Selected concepts in the philosophy of geography: Logical Positivism, areal differentiation and spatial organization.

Module 2:

Dualism in Geography: Systematic and Regional Geography, Physical and Human Geography, Determinism and Possibilism. Laws, theories and models, the quantitative revolution, Behaviourism, post modernism.

Module 3:

Regional Geography: Concept of region, Regionalization and the regional methods.

Historical development: Contributions of different scholars during Ancient, Medieval and Modern period.

Module 4:

Geography in the 20th Century: Concept and methodological developments, Status of Indian geography. Future of geography, Radical geography; Feminist Geography, geographical thought with reference to changing views on man-environment relationship. Geography and public policy

Books Recommended:

- Arentsen, M., Stam R. and Thuijjs R., *Post-modern Approaches to Space*, ebook.
- Bhat, L.S., *Geography in India* (Selected Themes), Pearson.
- Bonnett, A., *What is Geography?* Sage.
- Dikshit, R. D., *Geographical Thought: A Contextual History of Ideas*, Prentice– Hall India.
- Hartshorne R., *Perspectives of Nature of Geography*, Rand MacNally and Co.
- Holt-Jensen A., *Geography: History and Its Concepts: A Students Guide*, SAGE. Johnston R. J., (Ed.), *Dictionary of Human Geography*, Routledge.
- Johnston R. J., *Geography and Geographers*, Anglo-American Human Geography since 1945, Arnold, London.
- Kapur A., *Indian Geography Voice of Concern*, Concept Publications.
- Martin Geoffrey J., *All Possible Worlds: A History of Geographical Ideas*, Oxford.
- Soja, Edward, *Post-modern Geographies*, Verso, London.
- Husain, Majid, *Evolution of Geographical Thought*, Rawat Publication, Delhi.

- Rawat, D. S. & Kaushik, S. D., *Geographical Thoughts and Methodology*, Rastogi Publication, Meerut.
- Maurya, S. D., *Bhaugolik Chintan Ka Itihas*, Pravalika Publications, Allahabad.
- Kaushik, S. D., *Bhaugolik Vichardharaen evam Vidhi Tantra*, Rastogi Publications, Meerut.

GEOG -C-102	GEOMORPHOLOGY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course contents:

Module 1:

Nature and scope of geomorphology, fundamental concepts, geological structures and land forms. Regional geomorphology of peninsular India, Ganga plains, Chotanagpur plateau and west coastal plains.

Module 2:

Earth movements: Epeirogenic, Orogenic and Cymatogenic Earth movement, Isostasy, Plate Tectonics. Seismicity: Vulcanicity, orogenic structures with reference to the evolution of Himalaya.

Module 3:

Exogenetic Processes: Concept of gradation, agents and processes of gradation, causes, types and classification of weathering. Mass movement, erosional and depositional processes and resultant landforms, slope evolution, down wearing, parallel retreat.

Module 4:

Dynamics of fluvial, glacial, Aeolian, marine and karst processes and resulting landforms. Applied geomorphology, application geomorphic mapping, environmental geomorphology, geomorphic hazards.

Books Recommended:

- Bloom A. L., *Geomorphology: A Systematic Analysis of Late Cenozoic Landforms*, Prentice-Hall of India, New Delhi.
- Bridges E. M., *World Geomorphology*, Cambridge University Press, Cambridge.
- Christopherson, Robert W., *Geosystems: An Introduction to Physical Geography*, Ed., Macmillan Publishing Company.
- Kale V. S. and Gupta A., *Introduction to Geomorphology*, Orient Longman, Hyderabad.
- Knighton A. D., *Fluvial Forms and Processes*, Edward Arnold Publishers, London.
- Richards K. S., *Rivers: Form and Processes in Alluvial Channels*, Methuen, London.
- Selby, M.J., *Earth's Changing Surface*, Indian Edition, OUP.
- Skinner, Brian J. and Stephen C. Porter, *The Dynamic Earth: An Introduction to Physical Geology*, 4th Edition, John Wiley and Sons.
- Thornbury W. D., *Principles of Geomorphology*, Wiley.
- Gautam, A., *Bhautik Bhugol*, Rastogi Publications, Meerut.
- Tikkaa, R N., *Bhautik Bhugol ka Swaroop*, Kedarnath Ram Nath, Meerut.
- Singh, S., *Bhautik Bhugol ka Swaroop*, Prayag Pustak, Allahabad.
- Tiwary Ram Kumar, *Bhautik Bhugol*, Rajasthan Hindi Granth Academy, Jaipur.

GEOG -C-103	CLIMATOLOGY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course contents:

Module 1:

Nature and scope of climatology and its relationship with meteorology, composition and structure of the atmosphere.

Insolation, heat balance of the earth, Greenhouse effect, vertical and horizontal distribution of temperature, local winds, jet streams, general circulation in the atmosphere.

Module 2:

Tropical, temperature and high latitudes weather system-concept of air mass and atmospheric disturbances. Cyclones-tropical and temperate. Stable and unstable atmosphere: environmental lapse rate, dry and wet adiabatic lapse rate and atmospheric stability.

Ocean-atmosphere interaction-El Nino, southern oscillation (ENSO) and La Nina.

Monsoon winds, Nor westers.

Module 3:

Climatic classification of Koppen and Thornthwaite

Climate changes: Evidences, possible causes

Applied Climatology: Climate, Hydrology and Water Resources;

Urban climate and global environment change: The nature of the urban climates, Urban Heat Island (UHI), Impact of the urban climate on Global Environment Change (GEC).

Module 4:

Global warming, environmental impacts and society's response, Atmospheric effects of thunders, Thunderstorms and Droughts. Climate Impact Assessment.

Books Recommended:

- Gautam, Alka, *Jalvayu evam Samudra Vigyan*, Rastogi Publication, Meerut.
- Barry R. G. and Carleton A. M., *Synoptic and Dynamic Climatology*, Routledge, U.K.
- Barry R. G. and Corley R. J., *Atmosphere, Weather and Climate*, Routledge, New York.
- Critchfield H. J., *General Climatology*, Prentice-Hall of India, New Delhi.
- Lutgens F. K., Tarbuck E. J. and Tasa D., *The Atmosphere: An Introduction to Meteorology*, PrenticeHall, Englewood Cliffs, New Jersey.
- Oliver J. E. and Hidore J. J., *Climatology: An Atmospheric Science*, Pearson Education, New Delhi.
- Trewartha G. T. and Horne L. H., *An Introduction to Climate*, McGraw-Hill.
- Gupta L. S., *Jalvayu Vigyan*, Hindi Madhyam Karyanvay Nidishalya, Delhi Vishwa Vidhyalaya, Delhi.
- Lal, D. S., *Jalvayu Vigyan*, Prayag Pustak Bhavan, Allahabad.
- Vatal, M., *Bhautik Bhugol*, Central Book Depot, Allahabad.
- Singh, S., *Jalvayu Vigyan*, Prayag Pustak Bhawan, Allahabad.
- Andrew. D. Ward and Stanley, *Environmental Hydrology*, 2nd edition, Lewis Publishers, CRC Press.
- Karanth, K.R., *Ground Water: Exploration, Assessment and Development*, Tata- McGraw Hill, New Delhi.
- Ramaswamy, C., *Review of floods in India during the past 75 years: A Perspective*. Indian National Science Academy, New Delhi.
- Rao, K.L., *India's Water Wealth* 2nd edition, Orient Longman, Delhi.
- Singh, Vijay P., *Environmental Hydrology*, Kluwar Academic Publications, The Netherlands.
- Garrison T., *Oceanography*, Wordsworth Company, Belmont
- Kershaw S., *Oceanography: An Earth Science Perspective*, Stanley Thornes, UK.
- Sharma R. C. and Vatal M., *Oceanography for Geographers*, Chaitanya Publishing House, Allahabad.
- Sverdrup K. A. and Armbrust, E. V., *An Introduction to the World Ocean*, McGraw Hill, Boston.
- Singh, M., Singh, R.B. and Hassan, M.I. (Eds.), *Landscape Ecology and Water Management*, Proceedings of IGU Rohtak Conference, Volume 2

GEOG -C/P-104	PRACTICAL	(5 Credits, 75X02 Lectures) FM: 100 (70+30)
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- The syllabus for practical is divided into two sections- Sec A and B

Section-‘A’

Time: 3 Hours
FM: 50 (35+15)

Course contents:

Unit 1:

Map Projection: Bonne’s Projection, Polyconic Projection, Mercator’s Projection, Gall’s Projection.
20 (14+6) Marks

Unit 2:

Gnomonic Projection (Polar), Gnomonic Projection (Equatorial), Stereographic Projection (Polar), Stereographic Projection (Equatorial), Orthographic Projection (Polar), Orthographic Projection (Equatorial).
20 (14+6) Marks

Unit 3:

PNB+ Viva Voce.
10 (7+3) Marks

Section-‘B’

Time: 3 Hours
FM: 50 (35+15)

Physical Field Survey

Allotted by Departmental Council (Any part of Jharkhand region)

Objectives:

The main objective of the field work (Physical) is to conduct an extensive survey of a continuous wider region and identify salient landforms, their genesis and their impact on human life, flora and fauna.

- To trace the prominent features of the area to be surveyed, identify salient landforms feature of the selected area on a topographical sheet.
- To identify the landforms on the surface while in the field. Also note the agents of erosion, transportation and deposition associated with the landforms.
- To identify the classify the biodiversity in the area (flora & fauna)
- To observe the relationship of various landforms, with land use, settlement structure and life style of people.
- Based on observations of the above characteristics prepare a field survey report. The report needs to be supplemented with maps, sketches, photographs etc.

Books Recommended:

- Sharma, J. P., *Prayogik Bhugol*, Rastogi Prakashan, Meerut.
- Singh, L. R., *Prayogik Bhugol Ke Mool Siddhant*, Sharda Pustak Bhawan, Allahabad.

- Singh and Singh, *Elements of Practical Geography*, Kalyani Publishers, New Delhi.
- Chauhan, R. P., *Ramsurat, Prayogatmak Bhugol Ki Rooprekha*, Vasundhara Prakashan, Gorakhpur.
- Sinha evam Bala, *Uchh Cartography*, Sharda Pustak Bhawan, Allahabad.
- Sarkar, Ashish, *A Practical Geography*, Orient Blackswan Private Limited, New Delhi.
- Saha, P., *Advanced Practical Geography*, Orient Blackswan Private Limited, New Delhi

SEMESTER-II

GEOG -S-205	ENVIRONMENTAL GEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Nature and Interdisciplinary Aspect of Environmental Geography, Ecological Approaches, Definition and Meaning of environment, Habitat, Ecological Niche, Bio-sphere and Biodiversity.

Module 2:

Ecosystem: Structure and Functioning of Ecosystem, Pond as an Ecosystem, Food Chains, Food Webs, Food Pyramid. Biomes – Equatorial to Tundra i.e., 11 types. Man and Environmental Relationships. Resource Use and Ecological Imbalance with reference to Soil, Forests and Energy Resources. Man Made Ecosystem - Urban, Ecotourism, National Parks and Sanctuaries. Depletion of Ozone, Green House Effect and Acid Rain.

Module 3:

Man Induced Changes in Environment: Environmental Pollution, i.e., Air, Water, Noise, Solid Waste with special reference to India. Environmental Hazards, i.e., earth as Warehouses, Flood, Famines, Land Slides, Avalanches, Forest Fires, Impact of Green revolution and Extinction of Species.

Module 4:

Principles of Environmental Management- Environmental Policy of India, (post 2000 AD). Environment Impact Assessment (EIA). Global Summits and Agencies of Environment Conservation.

Books Recommended:

- Strahler A.N., *The Earth Sciences*, (1968), Harper International Education, New York.
- Richard H.B., *Physical Geography*, (2004), Heinmann Simple Services, Rupa & Company, New Delhi.
- Robinson H., *Bio Geography*, (1982), ELBS, New York.
- Healey I.N. and Moore P.D., *Bio-Geography*, (1973), Backwell Oxford, U.K.
- Strahler A.N. and Strahler A.H., *Environmental Geo Science*, (1973), Hamilton, California.
- Singh, Savinder, *Environmental Geography*, (2004), Prawalika Publication, Allahabad,
- Singh, Savindra, *Pryawaran Bhugol*, (2004), Prawalika Publication, Allahabad,
- Paul Selman, *Environmental Planning*, Sage Publicatoin, New Delhi.
- Tiwari, Ram Kumar, *Pryawaran Adhyayan*, (2005), Luxmi Publications, New Delhi.
- Rao, B.P., *Paryawaran Bhugol*, (2000), Vasundhara Prakashan, Gorakhpur.
- Strahler A.N. and Strahler A.H., *Geography and Man's Environment*, (1977), John Wiley & Sons, N.York.

GEOG -C-206	POPULATION GEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course contents:

Module 1:

Population Geography: Scope and objectives, development of population geography as a field of specialization, Population Geography and Demography.

Sources of population data; their level of reliability and problems of mapping of population data; Census process of major countries.

Module 2:

Population Distribution: Density and growth, world patterns and their determinants; India:

Population distribution, density and growth profile

Population dynamics: Demographic transition theories, Measurements of fertility and mortality,

Migration: National and International patterns.

Module 3:

Population composition: Age and sex, literacy, religion, caste and tribes, rural and urban;

Occupational structure in India.

Trends of Urbanization in India, Problems of urbanization.

Module 4:

Population and development: Population-Resources region and level of population and socio-economic development, concepts of under population, over population and Optimum population.

India's population policies, population and environment, implications for the future.

Importance of research in Population Geography.

Books Recommended:

- Maurya, S. D., *Population Geography*, Prawalika Publication, Allahabad.
- Chandana, R. C., *Jansankhya Bhugol*, KalyaniPublishers, New Delhi.
- Tripathi, R. D., *Jansankhya Bhugol*, Vasundhara Prakashan, Gorakhpur.
- Sahoo, H. (ed.) *Population Issues*, Rawat Publication, New Delhi.
- Tiwari, Ram Kumar, *Jansankhya Bhugol*, Prawalika Publication, Allahabad.
- Unisa, S., *Population Health and Environment*, Rawat Publication, New Delhi.
- Mukherjee, *Migration in India: Urbanization, Regional Disparities*, Rawat Publication, New Delhi.

GEOG -C-207	REGIONAL GEOGRAPHY: INDIA AND JHARKHAND	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course contents:

Section 'A'-India

Module 1:

Physical framework and geological formations. Climatic and vegetation regions, Agro- climatic regions and Industrial regions.

Macro-Regions: Genesis and changing profile, Geography and federalism, Indian Federalism, Reorganization of state.

Module 2:

Mineral and power resources, population Development environment interface, Policies and programmes.

Case studies of Macro/Micro regions.

- a) Middle Ganga Plain
- b) Chotanagpur Region
- c) National Capital Region (NCR)

Section 'B'-Jharkhand**Module 3:**

Physical basis of Regionalization and Human Resources

Economic and inter-linkages-Mineral Resources, Agriculture Landscape and industrial region.

Module 4:

Population Development-environment interface, policies and programmes.

Urbanization, tourism, problems of planning and development.

Books Recommended:

- Deshpande C. D., *India: A Regional Interpretation*, ICSSR, New Delhi.
- Johnson, B. L. C., ed., *Geographical Dictionary of India*, Vision Books, New Delhi. Mandal R. B. (ed.), *Patterns of Regional Geography – An International Perspective*, Vol. 3, Indian Perspective.
- Sdyasuk Galina and P Sengupta, *Economic Regionalisation of India*, Census of India.
- Sharma, T. C., *India - Economic and Commercial Geography*, Vikas Publ., New Delhi.
- Singh R. L., *India: A Regional Geography*, National Geographical Society of India. Singh, Jagdish, *India - A Comprehensive & Systematic Geography*, Gyanodaya Prakashan, Gorakhpur.
- Chauhan, Birendra Singh, & Gautam, Alka, *Bharatvarsha Ka Vistrit Bhugol*, Rastogi Publications, Meerut.
- Tiwari Ram Kumar, *Jharkhand ka Bhugol*, Rajesh Publication New Delhi.
- Sdyasuk Galina and P Sengupta, *Economic Regionalisation of India*, Census of India.
- Tiwari Ram Kumar, *Jharkhand ki Rooprekha*, Shivangan Publication Ranchi.
- Singh R. L., *India: A Regional Geography*, National Geographical Society of India. Singh, Jagdish, *India - A Comprehensive & Systematic Geography*, Gyanodaya Prakashan, Gorakhpur.
- Spate O. H. K. and Learmonth A. T. A., *India and Pakistan: A General and Regional Geography*, Methuen.
- Tirtha, Ranjit, *Geography of India*, Rawat Publs., Jaipur & New Delhi.
- Pathak, C. R., *Spatial Structure and Processes of Development in India*. Regional Science Assoc., Kolkata.
- Tiwari, R.C., *Geography of India*. Prayag Pustak Bhawan, Allahabad.
- Singh, Saroj Kumar, *Jharkhand Pradesh ki Bhaugolik Vyakhya*, Rajesh Publication, New Delhi.

GEOG -C/P-208	PRACTICAL	(5 Credits, 75x02 Lectures) FM: 100 (70+30)
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- The syllabus for practical is divided into two sections-Sec-A and Sec-B. The practical examination including field work examination.

Section ‘A’

Time: 3 Hours

FM: 50(35+15)

Course contents:

Unit 1:

Map Projection: Globular Projection, Sinusoidal Projection (simple), Interrupted Sinusoidal Projection, Mollweide’s Projection, Interrupted Mollweide’s Projection. **20 (14+6) Marks**

Unit 2:

Geological Maps: Construction of Sections and interpretation, identification of rocks and minerals.

20 (14+6) Marks

Unit 3:

PNB+ Viva-Voce.

10 (7+3) Marks

Section ‘B’

Time: 3 Hours

FM: 50 (35+15)

Instrumental Field Survey:

Course contents:

Unit 1:

Importance of field work, Scope and purpose. Types of survey, principles and applications of selected survey instruments, Plane Table, Plan preparation, Resection method: Two point problem, three point problem, tracing paper method. **20 (14+6) Marks**

Unit 2:

Prismatic compass: Open and closed traverse, elimination of error by Bowditch method.

20 (14+6) Marks

Unit 3:

PNB+ Viva-Voce.

10 (7+3) Marks

Books Recommended:

- Sharma, J. P., *Prayogik Bhugol*, Rastogi Prakashan, Meerut.
- Singh, L. R., *Prayogik Bhugol Ke Mool Siddhant*, Sharda Pustak Bhawan, Allahabad.

- Singh and Singh, *Elements of Practical Geography*, Kalyani Publishers, New Delhi.
- Chauhan, R. P., *Ramsurat, Prayogatmak Bhugol Ki Rooprekha*, Vasundhara Prakashan, Gorakhpur.
- Sinha evam Bala, *Uchh Cartography*, Sharda Pustak Bhawan, Allahabad.
- Sarkar, Ashish, *A Practical Geography*, Orient Blackswan Private Limited, New Delhi.
- Saha, P., *Advanced Practical Geography*, Orient Blackswan Private Limited, New Delhi

Semester-III

GEOG -A-309	OCEANOGRAPHY (Open Elective)	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course contents:

Module 1:

Nature and scope of Oceanography, History of Oceanography, Origin of ocean basin, Major features of ocean basin.

Module 2:

Physical and chemical properties of sea water (density, temperature, salinity etc.), Ocean currents, Wave and Tides.

Module 3:

Marine Biological Environment, Types of Organisms, Plankton, Nekton and Benthos, Major marine environments -Coastal, Estuaries, Delta and Deep pelagic environment.

Module 4:

Relief of Indian Ocean, Marine deposits and resources, Coral reefs, Impacts of human on the marine environment. Climatic and eustatic changes.

Books Recommended:

- Gautam, Alka, *Jalvayu evam Samudra Vigyan*, Rastogi Publication, Meerut.
- Critchfield H. J., *General Climatology*, Prentice-Hall of India, New Delhi.
- Lutgens F. K., Tarbuck E. J. and Tasa D., *The Atmosphere: An Introduction to Meteorology*, Prentice Hall, Englewood Cliffs, New Jersey.
- Oliver J. E. and Hidore J. J., *Climatology: An Atmospheric Science*, Pearson Education, New Delhi.
- Gupta L. S., *Jalvayu Vigyan*, Hindi Madhyam Karyanvay Nidishalya, Delhi Vishwa Vidhyalaya, Delhi.
- Lal, D. S., *Jalvayu Vigyan*, Prayag Pustak Bhavan, Allahabad.
- Vatal, M., *Bhautik Bhugol*, Central Book Depot, Allahabad.
- Singh, S., *Jalvayu Vigyan*, Prayag Pustak Bhawan, Allahabad.
- Andrew. D. Ward and Stanley, *Environmental Hydrology*, 2nd edition, Lewis Publishers, CRC Press.
- Ramaswamy, C., *Review of floods in India during the past 75 years: A Perspective*. Indian National Science Academy, New Delhi.
- Rao, K.L., *India's Water Wealth* 2nd edition, Orient Longman, Delhi.
- Singh, Vijay P., *Environmental Hydrology*, Kluwar Academic Publications, The Netherlands.
- Garrison T., *Oceanography*, Wordsworth Company, Belmont
- Kershaw S., *Oceanography: An Earth Science Perspective*, Stanley Thornes, UK.
- Sharma R. C. and Vatal M., *Oceanography for Geographers*, Chaitanya Publishing House, Allahabad.

GEOG -C-310	SETTLEMENT GEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Evolution and growth of human settlement, Theories of evolution of Settlements; Spatial and temporal trends in size and growth of settlements.

Spatial distribution: Pattern and types of Rural settlements; Theoretical models (Nearest Neighbour and Gravitational model).

Module 2:

Settlements structure: Morphological structure of cities, Empirical and theoretical models (Burgess, Hoyt and Harris & Ullman). Functional classification of urban centres.

City region and rural-urban fringe.

Module 3:

Functional typology of villages; Social, Economic, Cultural factors influencing the dynamics of settlement structure. Settlement hierarchy: Theories of Christaller and Losch (CPT) and their application to settlement hierarchy. Factors contributing to settlement hierarchy. Measurement of centrality and hierarchy.

Module 4:

Issues, Perspectives and policies on population and human settlements. Interface between human settlements and environment. Contemporary urban issues: Urban renewal, urban sprawl, slums, green belts, garden cities. Transformation and planning of Indian Village.

Books Recommended:

- Bose A., *India's Urbanization 1947-2000*, Tata Mcgraw Hill, New Delhi.
- Chisholm, M., *Rural Settlements and Landuse*, Hutchinson, London.
- Clout, R. D., *Rural Geography*, Pergamon Press, London.

GEOG -C-311	REGIONAL PLANNING AND DEVELOPMENT (INDIA)	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Regional concept in Geography, Merits and limitations for application to regional planning and development approaches to delineation of different types of regions and their utility in planning, planning process: sectoral, temporal and spatial dimensions, Short-term and long-term perspective planning.

Module 2:

Types of region: Formal and Functional, Uniform and Nodal, Single purpose and Composite region in the context of planning, Physical regions, resource regions, Special purpose region-river valley regions, Metropolitan regions.

Module 3:

Planning for region's development; Regions hierarchy; Multi-level planning in national context; decentralized planning; people's participation in planning.

Module 4:

Indicators of development and their data sources, Measuring levels of regional development and disparities – a case study of Jharkhand, regional development in India – problem and prospects.

Books Recommended:

- Ray, Jayshree, *Introduction to Development and Regional Planning*, Orient Blackswan, New Delhi.
- Puri, V. K. and Chand, Mahesh, *Regional Planning in India*, Allied Publishers Ltd., New Delhi.
- Chandana, R. C., *Regional Planning and Development*.
- Chandana, R. C., *Pradeshik Niyojan evam Vikash*, Kalyani Publishers, New Delhi.
- Srivastav, Chauhan, and Sharma, *Pradeshik Niyojan evam Santulit Vikash*, Vasundhara Prakashan, Gorakhpur.
- Aggrawal and Nath, *Regional Development and Planning in India*, Concept Publishing Company, New Delhi.
- Shukla, J., *Regional Development and Planning*, Disha Publication, New Delhi.

GEOG -C/P-312	PRACTICAL	(5 Credits, 75x02 Lectures) FM: 100 (70+30)
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Course contents:**Time: 3 Hours****Unit 1:**

Construction and interpretation of Climograph, Hythergraph, Isopleth, Choropleth, Compound Pyramid diagram, Ergograph, Band Graph. **20 (15+5) Marks**

Unit 2:

Lorenz Curve, Sampling Techniques, Regression Lines, Rank correlation (Spearman's method), Pearson's method of correlation. **20 (15+5) Marks**

Unit 3:

A) Field Study- Survey and report (approved by the Head of the Department). **20 (15+5) Marks**

B) Field Tour and Report **20 (15+5) Marks**

Unit 4:

PNB+ Viva-Voce. **20 (10+10) Marks**

Books Recommended:

- Sharma, J. P., *Prayogik Bhugol*, Rastogi Prakashan, Meerut.
- Singh, L. R., *Prayogik Bhugol Ke Mool Siddhant*, Sharda Pustak Bhawan, Allahabad.
- Singh and Singh, *Elements of Practical Geography*, Kalyani Publishers, New Delhi.
- Chauhan, R. P., *Ramsurat, Prayogatmak Bhugol Ki Rooprekha*, Vasundhara Prakashan, Gorakhpur.
- Sinha and Bala, *Uchh Cartography*, Sharda Pustak Bhawan, Allahabad.
- Sarkar, Ashish, *A Practical Geography*, Orient Blackswan Private Limited, New Delhi.
- Saha, P., *Advanced Practical Geography*, Orient Blackswan Private Limited, New Delhi.

SEMESTER-IV

GEOG -E-413A	BIOGEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Scope and development of Biogeography. Environment, Habitat and Plant- animal association, biome types.

Module 2:

Elements of Plant geography, distribution of forests and major communities. Plant successions in newly formed landforms. Examples from flood plains and glacial fore fields.

Module 3:

Zoogeography and its Environmental Relationship.

Module 4:

Palaeobotanical and Palaeo climatological records of environmental change in India. National Forest Policy of India. Conservation of Biotic Resources.

Books Recommended:

- Bhattacharyya, N. N., *Biogeography*, Rajesh Publications, New Delhi.
- Garg, H. S., *Jaiv Bhugol*, SBPD Publications, Agra.
- Anderson, *Ecology for Environmental Science*.
- Chapman, J.L. and Reiss, M.J., *Ecology Principles and Applications*, Cambridge University Press, Cambridge.
- Joy, T. et al, *Human Impact on The Ecosystem*, Oliver and Boyd, London.
- Kendeigh, S.C., *Ecology with Special Reference to Man and animals*, Prentice Hall, New York.
- Simmons, I.G., *Bio-geographical Processes*, George Allen and Unwin, London.

GEOG -E-413B	AGRICULTURAL GEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Nature and scope, Significance and development of agricultural geography, Approaches to the study of agricultural geography, Origin and dispersal of agriculture, Sources of agricultural data.

Module 2:

Determinants of agricultural land use – Physical, economic, social and technological, Land holding and land tenure systems, Land reforms, Land use policy and planning, Cropping pattern, Intensity of cropping.

Module 3:

Theories of agricultural location based on several multi dimensional factors, Von Thunen's model and its recent modifications, Whittlesey's classification of agricultural regions, Agro-climatic regions of India.

Module 4:

Agriculture in India – Land use and shifting cropping pattern, New trends in Indian agriculture, Green Revolution, White Revolution, Blue Revolution, Problems of Indian agriculture, Agricultural Policy of India.

Books Recommended:

- Sharma, B. L. & Bharadwaj, Pallak, *Krishi Bhugol*, Rastogi Publication, Meerut.
- Husain, Majid, *Agricultural Geography*, Rawat Publications, Delhi.
- Tiwari, Ramchandra, & Singh, Brahmanand, *Krishi Bhugol*, Pravalika Publications, Allahabad.
- Basu, D.N., and Guha, G.S., *Agro-Climatic Regional Planning in India*, Vol. I & II, Concept Publication, New Delhi.
- Bryant, C.R., Johnston, T.R, *Agriculture in the City Countryside*, Belhaven Press, London.
- Mohammad, N., *New Dimension in Agriculture Geography*, Vol. I to VIII, Concept Pub., New Delhi.
- Shafi, M., *Agricultural Geography*, Doring Kindersley India Pvt. Ltd., New Delhi.
- Singh, J., and Dhillon, S. S., *Agricultural Geography*, Tata McGraw Hill, New Delhi. Tarrant J. R., 1973: *Agricultural Geography*, David and Charles, Devon.

GEOG -E-413 C	SOIL GEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Nature, scope and significance of Soil Geography, its relationship with Pedology. Soil forming factors: parent material, organic, climatic, topographic, Spatio- temporal dimensions. Processes of soil formation and soil development: physical, biotic and chemical. Soil Profile: development; Soil catena, pedogenic regimes; podzolization, laterization, calcification and gleization.

Module 2:

Soil organisms, macro-animals (earthworms, sowbugs, mites, centipedes, rodents and insects), Micro animals and plants – Nematodes, Protozoa rotifers; fungi, bacteria, algae and actinomyces.

Module 3:

Physical properties of soils: morphology, texture, structure, water, air, temperature and other properties of soil; Chemical properties of soil and soil reaction; Genetic classification of soils, Taxonomic classification of soils zonal, azonal and intra- zonal soils, their characteristics and world patterns. Soil erosion, degradation and conservation.

Module 4:

Evaluation of land and soil: Parametric and non-parametric systems Land capability classification, Soil survey, modern techniques, field study of soil profile and their characteristics. Soil reclamation and management: Soil survey and landforms in environmental management; Integrated soil and water management; Sustainable development of soil resources with reference to India.

Books Recommended:

- Biswas, T.D. and Mukherjee, S. K., *Text book of Soil Science*, Tata McGraw Hill, new Delhi.
- Buckman, H.R. and Brady, N.C., *Nature and Properties of Soil*, McMillan, New York.
- Bunting, A., *Geography of Soil*, Hutchinson, London.
- Daji, J.A., Kadam, J.R. and Patil, N.D., *A Textbook of Soil Science*, Media Promoters and Publishers Pvt Ltd, Mumbai.
- Fitzpatrick, E.A., *Soils, Their Formation, classifications and Distribution*, ELBS/ Longman, London.
- Foth, H.D. and Schafer, J.W., *Soil Geography and Land Use*, John Wiley, New York.
- Joffe, J.S., *ABC of Soil*, Oxford Book Co., Kolkata.

GEOG -E-414A	GEOGRAPHY OF TOURISM AND TRANSPORT	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Nature, Scope, Significance and Development of Transport Geography, Factors associated with the development of transport system, Physical Economic, Social, Cultural and Institutional, Technological and Regional development and transport development.

Module 2:

Transport policy and planning, transport development in developing countries, urban transportation, Growth and problems of urban transportation, Transport and environment degradation, Vehicular

pollution and congestion, Alternatives to transport system in Mega cities of India. National highway development and planning in India.

Module 3:

Basis of tourism, Definition of tourism, Factors influencing tourism, Historical, Natural, Social, Cultural and Economical. Motivating factor for pilgrimages, leisure, Recreation, elements of tourism as an Industry. Geography of tourism, its spatial affinity, Areal and Locational dimension comprising physical, cultural, Historical and Economical. Tourism types; eco-ethno' Coastal and adventure tourism, National and International tourism, Globalization and tourism.

Module 4:

Tourism circuits-short and longer detraction, Agencies and international, Indian hotel industry, Impacts of tourism, Physical economic and social and perceptual, Positive and negative impacts, Environmental laws and tourism, current trends spatial pattern and recent changes, Role of foreign capital and impact of globalization on tourism.

Books Recommended:

- Dhar, P.N., *International Tourism: Emerging Challenges and Future Prospects*. Kanishka, New Delhi.
- Hall, M. and Stephen, P., *Geography of Tourism and Recreation – Environment, Place and Space*, Routledge, London.
- Kamra, K. K. and Chand, M., *Basics of Tourism: Theory, Operation and Practise*, Kanishka Publishers, Pune.
- Singh Jagbir, “*Eco-Tourism*”, I.K. International Pvt. Ltd. S25, Green Park Extension, Uphaar Cinema Market, New Delhi, India.
- Prasad, Kamla, *Tourism in Jharkhand*, Rajesh Publications, New Delhi.

GEOG -E-414 B	SOCIAL GEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Nature and development of social geography, philosophical bases of social geography-Positivists; structuralist; radical, humanist, post-modern and post structuralist; social geography in the realm of social sciences.

Module 2:

Space and society: Understanding society and its structure and process; geographical bases of social formations; contribution of social geography to social theory; power relations and space.

Module 3:

Towards a social geography of India; Social differentiation and region formation; evolution of socio-cultural regions of India; bases of social region formation; role of race, caste, ethnicity; religion and languages; Indian unity and diversity; social transformation and change in India.

Module 4:

Social well-being: Concepts of social well-being, physical quality of life, Human development; measurement of human development with social, economic and environmental indicators; Rural urban deprivation in India with respect to health care; education and shelter; deprivation and discrimination issues relating to women and under privileged groups; Patterns and bases of rural and urban society.

Public policy and social planning in India; review of Five Year Plan and area plans towards social policy in India; Strategies to improve social well-being in tribal, hill, drought and flood prone areas; Social and environmental impact assessment of development projects.

Books Recommended:

- Maurya, S. D., *Samajik Bhugol*, Sharda Pustak Bhawan.
- Singh, B. A. N., *Samajik Bhugol*, Prayag Pustak Bhawan.
- Ahmed, A., *Social Geography*, Rawat Publication, New Delhi
- Jones, E. and Eyles, J., *An Introduction to Social Geography*, Oxford University Press, Oxford.
- Ahmed A., *Social Geography*, Rawat Publications, Delhi.
- Cater J. and Jones T., *Social Geography: An Introduction to Contemporary Issues*, Hodder Arnold.
- Panelli R., *Social Geographies: From Difference to Action*, Sage Publications.
- Smith D. M., *Geography and Social Justice*, Blackwell, Oxford.
- Smith S. J., Pain R., Marston S. A., Jones J. P., *The SAGE Handbook of Social Geographies*, Sage Publications.

GEOG -E-414 C	POLITICAL GEOGRAPHY	(5 Credits, 60 Lectures + 15 Tutorials) FM: 100 (70+30)
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		Mid Semester (Internal)				End Semester		Grand Total
		Written	Attendance	Assessment	Total	Theory	Distribution of Marks	
1	Full Marks	20	05	05	30	70	5x14	100 (70+30)
2	Pass Marks	08	04		12	28	-	40

	No. of Questions to be set- 09 (Nine)			
	Structure of Question	No. of Questions	Distribution of Marks	Total Marks
(A)	Group A is compulsory and will contain two questions. Question No.1 (A) will be MCQ of 1 mark each (six questions). Question No.1 (B) will be short answer type to be answered in about 50 words of 4 marks (2 Questions).	1(A)- 6 1(B)- 2	1(A)- 6x1=6 1(B)- 2x4=8	14
(B)	Group B will contain long answer type eight questions out of which any four can be answered. Each question carries 14 marks.	4	4x14	56
	Total			70

Course Contents:

Module 1:

Nature, scope, subject matter and recent development in political geography, approaches to study; major schools of thought.

Module 2:

Geographic Elements and State: Physical Elements; Human elements; Economic elements; Political Geography and environment interface.

Module 3:

Themes in Political Geography; State, Nation, Nation-State and Nation- building, Frontiers and boundaries, Colonialism, decolonization, Neocolonialism, federalism and other forms of governance. Changing patterns of World Powers Perspectives on core-periphery concept, Conflicts and cooperation.

Module 4:

Geopolitical significance of Indian Ocean: Political geography of any one of the following regions: SAARC Region, South-East Asia, West Asia, East Asia, European Union.

Political geography of contemporary India with special reference to: The changing political map of India, Unity and diversity: centripetal & centrifugal forces; stability & instability' Interstate issues (like water disputes & riparian claims) and conflict resolutions insurgency in border states; Emergence of New States; Federal India: Unity in Diversity.

Note: The region may also be selected from the regions not referred to above, depending on the expertise available with the Department.

Books Recommended:

- Agnew J., *Making Political Geography*, Arnold.
- Agnew J., Mitchell K. and Toal G., *A Companion to Political Geography*, Blackwell.
- Cox K. R., Low M. and Robinson J., *The Sage Handbook of Political Geography*, Sage Publications.
- Mathur H M and M M Cernea (eds.) *Development, Displacement and Resettlement – Focus on Asian Experience*, Vikas, Delhi.
- Verma, M. K., *Development, Displacement and Resettlement*, Rawat Publications, Delhi.
- Dwivedi, R. L., *Fundamentals of Political Geography*.
- Adhikari, Sudeepa, *Political Geography*.
- Dikshit, Ramesh Dutta, *Political Geography: The Discipline and its Dimensions*.
- Dikshit, Ramesh Dutta, *Rajneetik Bhugol: Samsamayik Paridrishti*.

GEOG -C/P-415	PRACTICAL	(5 Credits, 75x02 Lectures) FM: 100 (70+30)
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Course Contents:**Time: 4 Hours****Unit 1:**

Profiles: Serial, Super-imposed, Projected and Composite on the basis of topographical sheets.

20 (15+5) Marks**Unit 2:**

Slope Analysis: Wentworth's method, Smith's method.

20 (15+5) Marks**Unit 3:**

Interpretation of Topographical Sheets: Relief, Drainage and Settlement.

20 (15+5) Marks**Unit 4:**

Instrumental Survey: Theodolite- horizontal and vertical (height) measurement, accessible and inaccessible method. Dumpy Level- Traverse Survey, Spot Height Determination and Contour Plan Preparation. Principles and applications of other smaller instruments- Sextant- Abney Level and Indian Clinometer.

20 (15+5) Marks

PNB+ Viva-Voce.

20 (10+10) Marks**Books Recommended:**

- Sharma, J. P., *Prayogik Bhugol*, Rastogi Prakashan, Meerut.
- Singh, L. R., *Prayogik Bhugol Ke Mool Siddhant*, Sharda Pustak Bhawan, Allahabad.
- Singh and Singh, *Elements of Practical Geography*, Kalyani Publishers, New Delhi.
- Chauhan, R. P., *Ramsurat, Prayogatmak Bhugol Ki Rooprekha*, Vasundhara Prakashan, Gorakhpur.
- Sinha and Bala, *Uchh Cartography*, Sharda Pustak Bhawan, Allahabad.
- Sarkar, Ashish, *A Practical Geography*, Orient Blackswan Private Limited, New Delhi.
- Saha, P., *Advanced Practical Geography*, Orient Blackswan Private Limited, New Delhi.

GEOG -D-416	DISSERTATION/PROJECT	(5 Credits, 150 Lectures) FM: 100 (70+30)
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Dissertation/Project: Evaluation of project dissertation work may be as per the following guidelines:

- **Mid-Semester/Internal Assessment Examination** = 30 marks (**Annexure-1**)
- **End Semester Examination:** Project model (if any) and the Project record notebook, Project presentation and viva-voce = 70 marks
(Jointly conducted by One External & One Internal Examiners)

Overall project dissertation may be evaluated under the following heads:

- Motivation for the choice of topic
- Project dissertation design
- Methodology and Content depth
- Results and Discussion
- Future Scope & References
- Participation in Internship programme with reputed organization
- Application of Research technique in Data collection
- Report Presentation
- Presentation style
- Viva-voce

Note:

- (a) Each student must submit two copies of the dissertation work duly forwarded by the Head of the Department and duly signed by the supervisor concerned. The forwarded copies will be submitted to the concerned Department of University, for evaluation.

The paper will consist of:

- Field work/Lab work related to the project.
 - Preparation of dissertation based on the work undertaken.
 - Presentation of project work in the seminar on the assigned topic & open viva there on.
- (b) Each student shall have to complete a project work on any topic of his choice, but relevant to the frontier area of Science and Technology, or on a topic allotted by his/her Project Guide/Supervisor/Department in Semester -IV. This is compulsory and the candidates shall ensure that his project is on a relevant topic completed by him independently with the help and inputs from his/her guide/supervisor. Other guidelines pertaining to this paper shall be provided by the Department.
- (c) Student alone or in a group of not more than five, shall undertake one Project approved by the Subject Teacher/H.O.D. of the Department/College concerned. The progress of the Project shall be monitored by the faculty members at regular intervals.
- (d) Students will select topics for the project work in consultation with a teacher of the Department. The Seminar will be held in the concerned Department of University.

Format of the Dissertation/Project:

The **Dissertation/Project** shall be presented with the following specifications:

- Size of Paper:** A4. Dissertation/Project must be printed on one side of the paper.
- Font Type:** Times New Roman/Arial for English and Kruti Dev 010 for Hindi.
- Font Size:** Font size for English text is 12pt. in standard form and for Hindi is 14pt.
- Font of Chapter Headings and Sub-Headings:**
 - Chapter headings may be written in all Capitals, bold text in point size 15
 - Sub-headings are written with left margin alignment

- First level sub-headings are written in normal sentence case using bold text in point size 14
 - Second level sub-headings are point size 13
- (e) **Spacing and Paragraphing:**
- Printing shall be in standardised form with 1.5 line spacing
 - Leave as triple spacing (2 empty lines) in base point size 12 before and after sub-headings and one empty line after all sub-headings
 - Use one empty line between left-justified paragraphs
- (f) **Margin:** Left margin should be 4cms and right and top margin should be 2cms. Bottom margins should be 2.5cms. No ornamental bordering of sides is permitted.
- (g) **Page Numbering:** Preliminary pages of the **Dissertation/Project**, i.e. those preceding in text are to be numbered in Roman numbered. Text should be numbered in Arabic beginning with Pg No 1 on the first page of chapter 1.
- (h) Preliminary sections of the **Dissertation/Project** should include, Declaration of Attendance, Certificate from Supervisor, Declaration by Candidate and Supervisor regarding Plagiarism, Acknowledgement, Table of Contents, List of Tables, List of Figures/Diagrams, List of Abbreviations (if any) and an Abstract of the Dissertation/Project.
- (i) **Referencing and Citation Style:** Citation i.e. a way of giving credit to individuals for their creative and intellectual works that you utilised to support your research, differs by faculty in the style of ordering, punctuating and formatting of name, date, page, work etc. The referencing of work and Citation style in the Dissertation/Project submitted in **Faculty of Science and Social Science** will be in **American Psychological Association (APA) style (6th edition)**, for **Faculty of Humanities** except for the Indian Languages, format shall be **Modern Language Association (MLA) (8th edition)** and for **Medical Science**, it shall be **Vancouver style**.

Annexure-1**Research Methodology (Common for All Faculties)****M.A./M.Sc./M.Com. Courses****Semester-IV****Paper Code: GEOG.-D-416**

Mid Semester Examination (MSE): There will be **two** groups of questions in written examinations of **30 marks**. **Group A is compulsory** and will contain ten questions of **multiple type questions** consisting of **1 mark** each. **Group B** will contain **descriptive type eight questions** of **five marks** each, out of which any **four** are to be answered.

Broad topics of the syllabus are as under:

Introduction of Research Methodology: Meaning of Research, Objectives of Research, Research Methods

Types of Research: Descriptive vs. Analytical Research, Applied vs. Fundamental Research, Quantitative vs. Qualitative Research, Conceptual vs. Empirical Research

Research Process: Basic Overview; Literature Review; Formulating the Research Problem, Hypothesis, Research Questions, Research Methodology

Data Collection: Primary and Secondary Data, Sampling Method, Observation Method, Interview Method, Questionnaires, Case Study Method, Historical Method, Processing and Analysis of Data, Interpretation of Data/Results, Conclusions/Findings.

Research Writing: Synopsis, Article/Research Paper, Research Project, Thesis, Dissertation, Book, Book-Review, Case Review, Criteria of Good Research, Plagiarism

Citation Style & Methods: MLA, APA, Foot Note, Text Note, End Note, Footnotes, Bibliography, References

Reference Books:

- a) Best and Kahn, Research Methodology, PHI Limited.
- b) Kothari, C.R. Research Methodology (Methods and Techniques), New Age Publisher.

Annexure-2**Format of question Paper of Mid-Semester Theory Examination***Copyright Reserved***Binod Bihari Mahto Koyalanchal University, Dhanbad****Mid-Semester Examination xxxx (Session: xxxx-xx)****Subject/Code:**Full Marks: 20
Hours

Pass Marks: 08

Time: 1.5

General Instructions:

Candidates are required to give their answers in their own words as far as practicable.

The Questions are of equal value.

Answer any five questions of the following in which Q.1 is compulsory.**Group A****1. Multiple Choice Questions****(1x5=05)**

- (i)
- (ii)
- (iii)
- (iv)
- (v)

Group B**(Descriptive answer type questions)****Answer any three of the following.****(5x3=15)**

- 2.
- 3.
- 4.
- 5.
- 6.

X

Note: The Mid Semester Examination shall have three components. (a) Two Semester Internal Assessment Test (SIA) of 20 Marks each, (b) Class Attendance Score of 5 marks and (c) Day to Day & Extracurricular activities of 5 marks. “**Best of Two**” shall be applicable for computation of marks for SIA.

(Attendance Upto 75%, 1 mark; 75 < Attd. < 80, 2 marks; 80 < Attd. < 85, 3 marks; 85 < Attd. < 90, 4 marks; 90 < Attd., 5 marks).

Format of question Paper of End-Semester Theory Examination

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Binod Bihari Mahto Koyalanchal University, Dhanbad

End-Semester Examination xxxx (Session: xxxx-xx)

Subject/Code:

Full Marks: 70
3Hours

Pass Marks: 28

Time:

General Instructions:

Candidates are required to give their answers in their own words as far as practicable.

The Questions are of equal value.

Answer any five questions of the following in which Q.1 is compulsory.

Group A

1. (A) Multiple Choice Questions

(1x6=06)

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

(B) Short answer type questions

(4x2=08)

- (a)
- (b)

Group B

(Long answer type questions)

Answer any four of the following.

(14x4=56)

- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

9. Short notes type questions (7x2=14)

- (a)
- (b)
- (c)
- (d)