



KARNATAK UNIVERSITY, DHARWAD
ACADEMIC (S&T) SECTION
ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಧಾರವಾಡ
ವಿದ್ಯಾಮಂಡಲ (ಎಸ್&ಟಿ) ವಿಭಾಗ



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NAAC Accredited
'A' Grade 2014

website: kud.ac.in

No. KU/Aca(S&T)/SVB-08/BOS /Geography (UG) /20-21 /1001

Date: 16 OCT 2020

NOTIFICATION

Sub: Regarding introduction of the syllabus of Geography UG under C.B.C.S. w.e.f. the academic year 2020-21 & onwards.

Ref: 1. UGC Letter DO No. 1-1/2016(SECY), dt. 10.08.2016.

2. Special BOS Res. No. 02, dt. 09.07.2020.

3. Special Faculty Res. No. 06, dt. 11.08.2020.

4. Special Academic Council Res. No. 42, dt. 21.08.2020.

5. Vice-Chancellor's order dated - 07-10-2020

Adverting to the above, it is hereby notified to the Principals of all constituent and affiliated degree colleges coming under the jurisdiction of Karnatak University, Dharwad that the Geography UG syllabus for I to VI Semester which is annexed herewith in Annexure-A is introduced under C.B.C.S. from the academic year 2020-21 & onwards.

Hence, the contents of this notification may please be brought to the notice of the students and all the concerned. The prescribed C.B.C.S. syllabus may also be obtained through K.U.website (www.kud.ac.in).


(Dr. Hanumantappa K.T.)
REGISTRAR

To,

1. The Chairman, BOS Geography (UG), Dept. of Geography, K.U.Dharwad.
2. The Chairman, Dept. of Geography, K.U.Dharwad.
3. The Principals of all the constituted and affiliated degree colleges under the jurisdiction of Karnatak University, Dharwad. (The same may be sent through e-mail)
4. The Registrar (Evaluation), K.U.Dharwad.

Copy fives to:

1. Dr. Ch.Ramesh, Dean, Faculty of Science & Tech., Dept. of Botany, K.U.Dharwad.
2. The Director, IT Section, Examination Section, K.U.Dharwad for information and to upload on K.U.Website (www.kud.ac.in).

Copy to:

1. PS to Vice-Chancellor, K.U.Dharwad.
2. S.A. to Registrar, K.U.Dharwad.
3. O.S., Exam UG / Confl / QP / GAD Section, K.U.Dharwad.
4. The System Analyst, Computer Unit Exam Section, K.U.Dharwad.



KARNATAK UNIVERSITY, DHARWAD

B.A. Programme

DRAFT SYLLABUS FOR

GEOGRAPHY (OPT.)

AS DISCIPLINE SPECIFIC COURSE (DSC) and

SKILL ENHANCEMENT COURSE (SEC)

UNDER

CHOICE BASED CREDIT SYSTEM (CBCS)

Effective from 2020-21

Preamble:

Nature has provided the most precious resources to the human beings, plants and animal wealth with five fundamental elements i.e. Land, Water, Air, Sun Radiation and Sky. Therefore, the life of these exists on the earth. The Mother Earth is the shelter of all these and accordingly distributed on the geographical space in the world. Geographic knowledge and information of the earth's features is the core subject to be understood. One should know about where the geographic features are? What are their surroundings? How are their spatial relationships pertaining to development and management of nation? Geography also presents the relationship between man and the environment. A fair knowledge and understanding of Geography build a bridge between these two. If any person fails in understanding Geography of the Earth and its environment, one cannot understand natural disasters and their control. Understanding about the dimensions of the earth, its system and subsystems and how they interact to perform a single system is very essential. Location, place names, human environment Interaction, movement, and region can be easily understood through Geography itself. How the physical space and human face are interacting? The physical space is interacted by the human activities then the space is a matter of spatial movement, spatial interaction, spatial mobility and spatial arrangement. The concept of efficiency, sufficiency and consistency are the matter to distinguish between the critical and non-critical zone resources. Therefore, the Geographical study enhances advancement in intelligence, efficiency, informed decision-making, science-based planning, resource accounting, evaluation, and communication. Recently, Geography has turned into technical and applied oriented subject dealing with space technology particularly , Remote Sensing, *Aerial photographs*, Geographical Information Systems, Global Positioning System & Digital Cartographic Methods. This helps in gathering spatial information to planning and decision-making process to solve environmental, political, economic and social issues on the different geographical regions in the world.

The syllabus of CBCS of B.A. Geography course has been designed to understand the knowledge not only in the academic point of view but also for competitive examinations which helps the students who are going to prepare Civil Service Examinations to become Class-I & Class-II Officers state as well as national level. Since, the discipline is technically and technologically sound with latest changing tools and instruments will enhance the quality education and will have better placement. The students after their Degree will have multi-

options to decide whether to go ahead with Civil Service, teaching, research or geospatial technological fields. All the areas have got equal opportunities to provide them placements.

Objectives of the Course:

- To study the living conditions of the people in different parts of the globe.
- To enable and acquiring a knowledge of natural resources along with human resource.
- To understand the physical space and human face intervention changes the environment.
- To develop an understanding of how environment and climatic factors have influenced the life.
- To develop an understanding of basic concepts, principles and theories relating to geographical phenomena.
- To develop scientific attitude and to advance the ability to draw valid conclusions and independent thinking.
- To make students more competent and resourceful in the field of teaching, research, geospatial fields and competitive examinations.

SCHEME OF EXAMINATION

I. Theory Examination

- (i) Examination will be conducted at the end of each semester.
- (ii) Each theory paper carries a maximum of 100 marks (80+20) and duration of examination hour is 3 hours.
- (iii) Each theory Question paper will have three sections, consisting of 2, 5 & 10 marks respectively.
- (iv) In first section of QP, candidates have to answer any 5 and answer should not exceed more than 50 words.

In second section of QP, candidates will have to answer any 4 questions and answer should not exceed 200 words.

In third section of QP, candidates have to answer any 4 and answer should not exceed more than 500 words.

Questions for all three sections have to be set from the prescribed syllabus.

II. Practical Examination:

- (i) Each practical examination is of 3 hours' duration with a maximum of 50 marks of which 40 marks are allotted to examination and 10 marks for internal assessment. And submission of practical records is compulsory.
- (ii) The practical examination is to be conducted in batches in accordance with students offered the examination.
- (iii) There will be one internal examiner and one external examiner to conduct the practical examination for each batch.
- (iv) Semester I – VI practical examinations, there will be four questions and all are compulsory.

CBCS syllabus for B. A Degree course in Geography (opt.) from I to VI Semester is as follows:

B.A. (General) Programme structure under CBCS

Semester	*Core			Elective						Ability		
	DSC			**DSE			GE			***SEC		
	Course	L+T+P	Credit	Course	L+T+P	Credit	Course	L+T+P	Credit	Course	L+T+P	Credit
I	Geography	4+0+4	4+2=6									
	DSC-2A	5+1+0	5+1=6									
	DSC-3A	5+1+0	5+1=6									
II	Geography	4+0+4	4+2=6									
	DSC-2B	5+1+0	5+1=6									
	DSC-3B	5+1+0	5+1=6									
III	Geography	4+0+4	4+2=6									
	DSC-2C	5+1+0	5+1=6									
	DSC-3C	5+1+0	5+1=6									
IV	Geography	4+0+4	4+2=6									
	DSC-2D	5+1+0	5+1=6									
	DSC-3D	5+1+0	5+1=6									
V				Geography	4+0+4	4+2=6	GE-1E	2+0+0	2	SEC-1C	2+0+0	2
				DSE-2E	5+1+0	5+1=6						
				DSE-3E	5+1+0	5+1=6						
VI				Geography	4+0+4	4+2=6	GE-1F	2+0+0	2	SEC-1C	2+0+0	2
				DSE-2F	5+1+0	5+1=6						
				DSE-3F	5+1+0	5+1=6						
TOTAL			72			36			4			

L+T+P= Lecturing in Theory + Tutorial + Practical Hours per Week (no tutorial for practical subject).

* If the core course is Mathematics, there shall be two papers of 75 marks each. Then $L+T+P = (2 \times 3) + (2 \times 1) + 0$, but credit shall be 6 only.

** Each DSE shall have at least two papers and student shall choose any one paper from each DSE.

*** SEC 1 & 2 shall be from all three DSC but student shall choose any two in each semester (SEC may be practical or theory for 2 credits only).

Karnatak University, Dharwad
CBCS syllabus for Under Graduate Programme in Geography (opt.) as
DISCIPLINE SPECIFIC COURSE (DSC)
Effective from 2020-21

Sem Ester	Theory/ Practical	Subject Code	Instruction hour per week	Total Syllabus Hrs/ Sem	Duration of Exam.	Internal Assessment Marks	Sem final Exam. Marks	Total Marks	Credits
I	Theory	DSC (GYT: A)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: A)	04 hrs	52	03 hrs	10	40	50	02
II	Theory	DSC (GYT: B)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: B)	04 hrs	52	03 hrs	10	40	50	02
III	Theory	DSC (GYT: C)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: C)	04 hrs	52	03 hrs	10	40	50	02
IV	Theory	DSC (GYT: D)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: D)	04 hrs	52	03 hrs	10	40	50	02
V	*Theory P-I /P- II	DSE (GYT: E-I GYT: E-II)	04 hrs / 04 hrs	60/60	03 hrs	20	80	100	04
	Practical	DSE (GYPr: E)	04 hrs	52	03 hrs	10	40	50	02
VI	*Theory P-I /P- II	DSE (GYT: F-I) GYT: F-II)	04 hrs / 04 hrs	60/60	03 hrs	20	80	100	04
	Practical	DSE (GYPr: F)	04 hrs	52	03 hrs	10	40	50	02
Total			48 hrs	672/120		180	720	900	36

*Candidate shall choose either paper –I or P-II but not both in DSE theory.

GENERIC ELECTIVE (GE) and SKILL ENHANCEMENT COURSE (SEC) for Geography
opted as DSC

Sem Ester	Theory	Subject Code	Instruction hour per week	Total Syllabus Hrs/ Sem	Duration of Exam.	Internal Assessment Marks	Sem final Exam. Marks	Total Marks	Credits
V	Theory	GE-I (GYT E-III)	02 hrs	30	1.5 hrs	10	40	50	02
V	Theory	SEC-I (GY T. E-IV)	02 hrs	30	1.5 hrs	10	40	50	02

VI	Theory	GE—II (GY T F-III)	02 hrs	30	1.5 hrs	10	40	50	02
VI	Theory	SEC-II (GY T : F-IV)	02 hrs	30	1.5 hrs	10	40	50	02
Total			08 hrs	120		40	160	200	08

Particulars of the Semester wise Theory and Practical Papers and Paper Code of B.A. Course.

Semester	Paper Code	Title of the Paper	Course
I	GY T A	Physical Geography	DSC
	GY Pr. A	Scale and Maps	DSC
II	GY T B	Human Geography	DSC
	GY Pr. B	Interpretation of Indian Daily Weather Maps	DSC
III	GY T C	Regional Geography of Karnataka	DSC
	GY Pr. C	Interpretation of Topographical Maps	DSC
IV	GY T D	Environmental Geography	DSC
	GY Pr. D	Map Projections	DSC
V	GY T E-I	Regional Geography of India	DSE
	GY T E-II	Geography of Settlements	DSE
	GY Pr. E	Basic Statistics	DSE
	GY T E-III	Elements of Physical Geography	GE-I
	GY T E –IV	Regional Planning & Development	SEC-I
VI	GY T F-I	Economic Geography of the World	DSE
	GY T F-II	Population Geography	DSE
	GY Pr. F-I	Field Based Project report	DSE
	GY T F-III	Physical Geography of India	GE-II
	GY T F –IV	Basics of Remote Sensing	SEC-II

Note: All the DSC Courses are compulsory. Each DSE shall have at least two papers and student shall choose any one paper from each DSE and Practical is compulsory.

SEC Theory/Practical is compulsory of these two semesters.

The Practical batch is to be in accordance with University Norms.

B. A. Semester – I
Discipline Specific Course (DSC) under CBCS
GY- T A: PHYSICAL GEOGRAPHY

Credits: I. Theory : 04 Theory class 4hrs /wk. Total theory: 60 Lectures
80 marks for Sem end Examination (3 hrs) & 20 marks IA
II. Practical : 02 Practical: 4 hrs./wk. Total Practical: 52 hrs.
40 marks for Sem end Examination (3 hrs) & 10 marks IA
Total Credits : 06 Total Theory marks 100 and Practical marks 50

Unit	Title	Sub-unit	Hrs
1	Introduction to Physical Geography	Meaning, Field and Scope	04
II	Origin of the earth	Nebular and Tidal Theory	04
III	Lithosphere	Interior of the earth.	20
		Continental drift theory of Wegener and Plate tectonic theory.	
		Formations and types of Volcanoes, Earthquakes and Rocks.	
		Geomorphic Agents and Process of Denudations: River, Glacier Underground water and Winds.	
IV	Atmosphere	Composition and Structure.	20
		Insolation: Factors affecting the distribution of atmospheric temperature. Vertical and Horizontal distribution of atmospheric temperature	
		Atmospheric Pressure: Factors affecting the atmospheric Pressure. Vertical and horizontal distribution of pressure and World Pressure belts.	
		Wind System: Planetary, Seasonal, Local and Variable Winds (cyclones and anticyclones).	
		Precipitation: Humidity and Types of Rainfall.	
V	Hydrosphere	The Relief of the Oceans: Continental Shelf, Continental Slope, Deep Sea Plain and Troughs.	12
		Tides and ocean currents: Indian, Pacific and Atlantic	
		Salinity and temperature of Oceans: Atlantic, Pacific and Indian.	

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1. Conserva H.T (2004): Illustrated Dictionary of Physical Geography, Author House,

2. Gable R.E , Peterson J.F and Trapasso L.M (2007): Essentials of Physical Geography (8th edition) Thompson Books / Cole USA.
3. Garrett N (2000) Advanced Geography, Oxford University Press.
4. Goudie A (1984): The Nature of Environment: An advanced Physical Geography, Basil Husain M (2002): Fundamentals of Physical Geography, Rawat Publications, Jaipur.
5. Monkhouse F.J(2009): Principles of Physical Geography, Platinim Publishers,
6. Strahler A N and Strahler A H (2008): Physical Geography, John Wiley & Sons New
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B.A. Semester – I
Discipline Specific Course (DSC) under CBCS
GY-Pr A: SCALES AND MAPS

Unit	Title	Sub-unit	Hrs
I	Scales and Maps	Scales and Maps as a tools in Geography	04
II	Scales	Introduction: Definition, Types, Methods of Representation and uses of scales.	28
		Conversion of scales: Representative Fraction (RF) to Verbal scale and Verbal scale to Representative Fraction (RF).	
		Construction of scales: Graphical (Plain), Comparative, Pace, Time and Diagonal.	
III	Maps	Introduction: Definition, Types and Importance of Maps.	20
		Enlargement and Reduction of Maps by Graphical method (02 exercise each).	

References:

1. Gopal Singh: Map work and Practical Geography, 3rd ed. Vikas Publishing Houde, New Delhi.
2. Gupta K and Tyagi V.C : Working with Maps, Survey of India, Dept. of Sci. and Technology, Govt. of India, Dehra Dun 1992.
3. John and Keats: Cartographic design and production, 2nd ed. 1989, John wiley, New York.
4. Mishra R.P: Fundamentals of Cartography, 1969, Prasaranga, University of Mysore.

5. Monkhouse F.J and : Maps and Diagrams, Wilkinson H.R Mathuen and Co. Ltd. London, 1952
6. Phyllis Dink: Map work, 10th ed. Atma Ram and Sons, Delhi 1969.
7. Raisz E: General Geography, 1948, Tata, Mc-Grow-Hill New York.
8. Ranganath : An introduction to practical Geography, Vidyanidhi Publication, Gadag.
9. Singh R.L: Elements of Practical Geography, Kalyani Publishers, New Delhi.
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B.Sc. Semester – II
Discipline Specific Course (DSC) under CBCS
GY-T B: Human Geography

Unit	Title	Sub-unit	Hrs
I	Introduction to Human Geography	Introduction: Definition, Field and Scope of Human Geography. Branches of Human geography	08
II	Conceptual approaches of Man-Environmental Relationship	Environmental determinism, Possibilism and Neo-determinism	02
III	Social and Cultural Geography	Major races of the world: Classification and distribution of Caucasoid, Mangoloid, Negroid and Australoid. Culture and Religion of the World.	23
		Settlements: Types and Patterns of Rural settlements. Definition of urban places. The origin of towns and functional classification of towns.	
		Urbanization: Trends and Patterns of World Urbanizations	
IV	Tribes: Habitat and Economy	Major tribes of the world (Primitive people): Pygmies, Bushman, Eskimos, Semang and sakais.	19
		Major Indian Tribes: Todas, Bills, Gondas, Nagas and Santals.	
V	Population Geography	Growth and distribution of world population.	08
		Population composition: Sex-ratio and Literacy rate.	

References:

1. Dickens and Pitts: Introduction to Human Geography, 1963.
2. Harm D. Blij: Human and Economic Geography, Mac Millan, New York, 1992.
3. Husain M: Human Geography, Rawat Publications, Jaipur, 2003.
4. Nellson, Gabler & Vining Human: Human Geography, People, Culture and Land
5. Peter Danials, MichaelBradshaw Denis Shaw, James Sidaway: Human Geography, Issues for the 21st Century, Pearson, 2003.
6. Norris and Haring: Political Geography, Charles E. Merrill Publishing Company.

7. Ranganath: Principals of Human Geography (Kan Var) Vidyanidhi , Gadag, 2002.
8. Rubenstein J.M: An Introduction to Human Geography, MacMillon Publishing
9. ಲ. ಅಶೋಕ ಅಣ್ಣಪ್ಪಾಣ್ಣಿ
10. ಕೆ. ಗೋಪಾಲ್ ಅಣ್ಣಪ್ಪಾಣ್ಣಿ
11. ಏ. ಜಿ. ಜಿ. ಲಿಂಗಪ್ಪಾಣ್ಣಿ ಅಣ್ಣಪ್ಪಾಣ್ಣಿ
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B.Sc. Semester – II
Discipline Specific Course (DSC) under CBCS
GY-Pr B: Interpretations of Indian Daily Weather Reports

Unit	Title	Sub-unit	Hrs
I	Construction of Graphs	Single and double Line graph.	12
		Single and double Bar graph.	
		Climograph.	
		Hyther Graph.	
		Ergo Graph.	
II	Diagrams and Thematic Maps	Pie, Traffic-flow, Spheres and Wind-Rose	12
		Choropleth and Dot Maps	
III	Weather Instruments and IMD Weather Maps	Thermometer – Wet Bulb and Dry Thermometer.	12
		Barometer – Aneroid Barometer.	
		Rain gauge and Cup Anemometer	
		Weather Signs and Symbols	04
		Interpretation of Indian Daily Weather Report – 4 exercises (One exercise from each season).	12

References:

1. Gopal Singh: Map work and Practical Geography, 3rd ed. Vikas Publishing Houde, New Delhi.
2. Gupta K and Tyagi V.C : Working with Maps, Survey of India, Dept. of Sci. and Technology, Govt. of India, Dehra Dun 1992.
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11. ಕೆ. ಗೋಪಾಲ್ ಅಣ್ಣಪ್ಪಾಣ್ಣಿ
12. ಕೆ. ಜಿ. ಜಿ. ಲಿಂಗಪ್ಪಾಣ್ಣಿ & ಕೆ. ಜಿ. ಜಿ. ಲಿಂಗಪ್ಪಾಣ್ಣಿ ಅಣ್ಣಪ್ಪಾಣ್ಣಿ

B.A. Semester – III

Discipline Specific Course (DSC) under CBCS
GY-T C: REGIONAL GEOGRAPHY OF KARNATAKA

Unit	Title	Sub-unit	Hrs
I	Physical Aspects	Location, Size, Extent	16
		Physiographic divisions.	
		Climate, Rivers, Soils and Vegetation.	
II	Agriculture and River Valley Projects	River Valley Projects: Krishna, Malaprabha, Ghataprabha, Tunga Bhadra and Cauvery Rivers.	22
		River Water Dispute: Cauvery, Krishna and Kalasa Banduri.	
		Irrigation: Sources and Types	
		Types of Agriculture.	
		Cultivation, Distribution and Production of major Crops: Food crops: Paddy Ragi, Jowar and Wheat. Commercial crops: Cotton, Sugar Cane, Tobacco, Chilli. Horticulture Crops : Coffee and Tea.	
III	Mineral Resources and Industries	Distribution and Production of Mineral Resources: Iron ore, Manganese Bauxite and Gold.	10
		Distribution and Production of major industries: Iron and Steel, Sugar, Cotton textile and Cement Industries.	
IV	Transportation	Patterns of Road and Railway, Ports and Harbours.	05
V	Population	Growth and distribution, Density, Sex-ratio and Literacy.	07
		Process of urbanization and trends.	

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1. Karnatak State Gazette, 2 Volume.
2. Mallappa: Geography of Karnataka
3. Misra R.P: Geography of Karnataka State
4. NBK Reddy & Murthy G.S: Regional Geography of Mysore State
5. Dr. Ranganath: Regional Geography of Karnataka, Mysore Book House, Mysore
6. ಪೀಠಾಧ್ಯಾಪಕರು ಜಿ. ಪಿ. ಅರಸೀಕೆ & ಪೀಠಾಧ್ಯಾಪಕರು ಜಿ. ಜಿ. ಅರಸೀಕೆ Regional Geography of Karnataka
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B.A. Semester – III
Discipline Specific Course (DSC) under CBCS
GY-Pr C: Interpretation of Topographical Maps

Unit	Title	Sub-unit	Hrs
I	Representation of relief features	Methods of Representation of Relief Features	04
		Hill, Types of slopes-Convex, Concave, Undulating and Uniform slopes. Saddle, Plateau, Escarpment, Spur, Gorge, U & V Shaped valleys, Pars and Water Falls.	08
II	Marginal information of SOI Topographical Maps	Arrangement and marginal information of SOI Topographical Maps	04
		Conventional Signs and Symbols and Colours convention used in SOI Topographical Maps	08
III	Interpretation of Indian Topographical Maps	Relief Features	24
		Drainage Patterns	
		Vegetation Distribution	
		Settlement types and Distribution	
		Land-Use Patterns	
		Transport and Communication	
	Cross Section.	04	

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- Gopal Singh: Map work and Practical Geography, 3rd ed. Vikas Publishing Houde, New Delhi.
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B.A. Semester – IV
Discipline Specific Course (DSC) under CBCS
GY-T D: Environmental Geography

Unit	Title	Sub-unit	Hrs
I	Introduction	Meaning and components of environment. Field and scope of environmental Geography	05
II	Ecosystem	Types, Structure and Functions - Productivity, Food-chain, Food-Web, Ecological Pyramid. Bio-Geo-Chemical cycle – Hydrological, Carbon, Nitrogen Oxygen and Energy flow in the eco- system.	20

III	Bio-Diversity	Types and Uses of Bio-Diversity, Threats to Bio-Diversity. Endangered Species of India. Conservation of Bio-Diversity.	13
IV	Global Warming and Environmental Pollution	Green House effects. Ozone layer depletion- Causes, Consequences and protection	05
		Causes, Effects and Measures to control the pollution : Air, Water Soil and Solid waste.	12
V	Conservation and Management of Environment	National and International: Policies, Rio Summit, Kyoto Declaration and Swatch Bharat Abhiyan	05

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1. Agarawal K.C: Environmental Biology, Nidhi Pub. Bikaner, 2001.
2. Chausasia B.P: Environmental Pollution, Consequences and Measures.
3. Mathur H.S: Environmental Resources, The Crises of Development.
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5. Saxena H.M: Environmental Geography, Rawat Pub. Jaipur, 1999.
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8. Heywood V.H. & Warson R.T: Global Bio-Diversity Assessment, CUP,1995.
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B.Sc. Semester – IV
Discipline Specific Course (DSC) under CBCS
GY-Pr D: Map Projections

Unit	Title	Sub-unit	Hrs
I	Introduction of Map projection	Meaning, Classification, importance, Properties and Uses of Map Projections.	04
II	Map Projections: Properties, Uses and Graphical Construction	Cylindrical Projections: Simple Cylindrical, Cylindrical – equal area Mercator’s Projection.	12
		Conical Projections: Conical Projection with one standard parallels Bonne’s Projection.	12
		Zenith Projections: Polar Zenith equal area, Gnomonic Stereographic and Orthographic	12
III	Conventional Projections	Sinusoidal Projection and Millweids Projection	12

References:

1. Salar Masood M: Map Projections, Rao and Raghavam Co. Mysore.
2. Ranganath : Map Projections (Kan. Ver.) Chetana Book House, Mysore.
3. Ervin Raisz: General Cartography, Mc Graw Hill Book Company,
4. Singh R.L: Elements of Practical Geography, Allahabad.
5. George P. Kellaway: Methuen & Co. Ltd. London.
6. Gopal Singh: Map work and Practical Geography, Surjeet Pub. New Delhi.
7. S.S.Nanjannavar & M.F.Karennavar: Practical Geography.
8. Dr. S.S.Kadaramandalagi: Practical Geography.
9. Prof. P.Mallappa :Map Projections. Chetana Book House, Mysore

B.A. Semester – V
Discipline Specific Elective (DSE) under CBCS
GY-T E-I: Regional Geography of India

Unit	Title	Sub-unit	Hrs
I	Location and Physical Aspects	Location, Size and Extant and Land Frontiers	18
		Physiographic Divisions.	
		Drainage, Climate, Soils and Natural Vegetations	
II	Population	Growth, Distribution and Density of Population	10
		Sex-ratio and Literacy.	
III	Agriculture	Types of agriculture.	17
		Cultivation, Distribution and production : <i>Food crops</i> - Rice and Wheat. <i>Commercial Crops</i> - Sugar Cane and Cotton. <i>Plantation Crops</i> - Tea, Coffee and Rubber.	
IV	Minerals and Industries	Distribution and Production: Iron ore, Manganese, Bauxite, Coal, and Petroleum	05
		Location factors of Industries	01
		Distribution and Production: Sugar, Cotton	07

		Textile, Iron and Steel, Aluminium, Paper and Cement Industries.	
V	Transport	Road: National High ways and Quadrangle Corridor Railway: Railway Zone	02

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1. Gopal Singh: A Geography of India, Atmaram & Sons New Delhi.
2. ICAR: Cropping pattern in India, 1974.
3. Mathus S.M: Physical Geography of India, NBT, 1991.
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6. Khullar D.R: India A Comprehensive Geography, Kalyani Pub. Ludhiana, 2000.
7. Tiwari R.C: Geography of India, Prayag Pustak Bhavan, Allahabad, 2003.
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B.A. Semester – V
Discipline Specific Elective (DSE) under CBCS
GY-T E-II: Geography of Settlements

Unit	Title	Sub-unit	Hrs
I	Introduction	Meaning, Definition, Scope and Nature of Settlement Geography	08
II	Rural Settlements	Factors affecting the distribution of rural settlements. Origin and evolution of rural settlements.	20
		Types and Patterns of Rural Settlements.	
		Size and spacing of Rural settlements.	
		Morphology of Rural settlements – Physical, Functional and social.	
		Rural problems and planning.	
III	Govt. Recent Policies and Programmes for Rural Development	Sanitation and Water supply Program, Pradhana Mantri Grama Sadak Yojana, Pradhana Mantri Grameena Avasa Yojana, Pradhana Mantri Ujvala Yojana and Deen Dayal Upadhya Grameena Koushlya Yojana	05
IV	Urban settlements	Definition of urban places, origin of towns and functional classification of towns.	20
		Theories of Urban Land use: Concentric Zone theory, Multi Nuclei theory and Sector Theory	
		Urban Hierarchy, Primate City concept, Central place theory of Christler	
		Rural – Urban Continuum. Characteristics and development of Urban.Fringe and Urban Slums.	
V	Govt. Recent Policies	Smart City Mission, National Urban Livelihood	

	and Programmes for Urban Development	Mission, National Heritage City Development & Angementation Yojana (HRIDAY), Swatch Bharat Mission, Amruta urban development scheme.	07
		Urban problems and planning.	

Reference:

1. Husain M: Human Geography, Rawat Pub. Jaipur, 2003.
2. Nellson, Gabler & Vining: Human Geography, People Culture and Landscapes, 1995.
3. Norris and Haring: Political Geography, Charles E. Merrill Pub. Co.
4. Dr. Ranganath: Principles of Human Geography (Kan. Ver.) Vidyanidhi, Gadag,
5. Singh R.Y: Geography of Settlements, Rawat Pub. New Delhi, 2007.
6. Harold Carter: The study of Urban Geography, 1982.
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B.A. Semester – V
Discipline Specific Elective (DSE) under CBCS
GY-Pr E: Basic Statistics

Unit	Title	Sub-unit	Hrs
I	Introduction	Meaning, Importance and Limitations	04
II	Methods of Samplings, Sources of Data and Frequency Distribution	Sampling : Definition and Types	24
		Sources of Data : Primary and Secondary Data and Data Tabulation	
		Frequency Distribution : Histogram, Frequency Polygon, Frequency Curve and Ogive Curves	
III	Measures of Central Tendency and Dispersion	Measures of Central Tendency: Mean, Median and Mode	24
		Measures of Dispersion : Range, Quartile Deviation and Standard Deviation	

References:

1. Singh R.L: Elements of Practical Geography, Kalyani Publishers, New Delhi, 1979.
2. Gopal Singh: Map Work and Practical geography, 2nd ed. Vikas Pub. New Delhi.
3. Mishra R.P: Fundamentals of Cartography: Prasaranga, Mysore University, 1969.
4. Zamir Alvi: Statistical geography, Methods and applications, Rawat Pub. Jaipur, 1995.
5. D.V. Jangannavar: Elements of statistics.

B.A. Semester – V
Generic Elective (GE-I) under CBCS
GY T E-III: Elements of Physical Geography

Unit	Title	Sub-unit	Hrs
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I	Origin of the Earth and Lithosphere	Nebular Theory, Latitudes and Longitudes, Longitude and Time, International Date Line.	06
		The interior of the earth, Wegener's theory of continental drift. Formation, types and characteristics of Rocks Formation, Types and distribution: Earthquakes and Volcanoes.	06
II	Atmosphere	Structure and composition of the Atmosphere and Atmospheric heat budget. Mechanism of Monsoon Winds. Cyclones and Anti-Cyclones.	08
		Global warming and Ozone layer depletion	05
III	Oceanography	Configuration of Oceans. Distribution of Temperature and salinity of the Indian and Pacific ocean	05

References:

1. Conserva H.T (2004): Illustrated Dictionary of Physical Geography, Author House, USA.
2. Gabler R.E , Peterson J.F and Trapasso L.M (2007): Essentials of Physical Geography (8th edition) Thompson Books / Cole USA.
3. Garrett N (2000) Advanced Geography, Oxford University Press.
4. Goudie A (1984): The Nature of Environment: An advanced Physical Geography, Basil Blackwell Publishers, Oxford.
5. Humblin W.K (1995): Earths Dynamic system, Prentice Hall, N.J.
6. Husain M (2002): Fundamentals of Physical Geography, Rawat Publications, Jaipur.
7. Monkhouse F.J(2009): Principles of Physical Geography, Platinim Publishers, Kolkata.
8. Strahler A N and Strahler A H (2008): Physical Geography, John Wiley & Sons New Yo
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B.A. Semester – V
Skill Enhancement Course (SEC-I) under CBCS
GY T E-IV Regional Planning and Development

Unit	Title	Sub-unit	Hrs
I	Introduction	Concept, Need for regional planning and Types of Planning	08
II	Regions and Models of Regional Planning	Concept, Types and delineation of Regions: Formal and Functional Regions, Models of Regional Planning: Growth Pole	04
		Theory and growth foci concept in Indian context.	04

III	Backward regions and regional plans and NITI Aayoga	Planning for Tribal area Development, Planning for agriculture regions, planning for Drought prone area and DVC.	10
		The success story and the failures; NITI Aayoga.	04

Reference:

1. Blij H.J. De, 1971: Geography: Regions and concepts, John Wiley and Sons
2. Claval P.I., 1998: An Introduction to Regional Geography, Black Well Publishers, Oxford and Massachusetts.
3. Fried Mann J. and Alonso W. (1975): Regional Policy – Readings in Theory and Applications, MIT Press, Massachusetts.
4. Gore C.G, 1984: Regions in Question space, Development Theory and Regional Policy, Methuen, London.
5. D.N.Nath (2009) :Regional Planning in India
6. Mahesh Chand and Vinay kumar Puri. (1983): Regional Planning in India
7. Johnson E.A.J. 1970: The organization of space in development countries, MIT Press
8. Peet R., 1999 : Theories of Development, The Guilford Press , New York.
9. Ray Choudhari (2001):An Introduction to Development and Regional Planning with special reference to India
10. R.P.Misra,K.V.Sundaram and V.L.S. Prakasa Rao: (1976)Regional Planning In India
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B.A. Semester – VI
Discipline Specific Elective (DSE) under CBCS
GY-T F-I: Economic Geography of the World.

Unit	Title	Sub-unit	Hrs
I	Economic Geography: An introduction	Definition, Scope and Nature of economic Geography	10
		Approaches, Recent trends in Economic Geography.	
II	Physical Aspects and Natural Regions of the world	Physiographic divisions, Drainage, Climate, and Natural Vegetation.	20
		Natural Regions of the World: Equatorial, Monsoon, Desert, Grassland and Tundra.	05
III	Agriculture	Types of farming :Shifting cultivation, Subsistence and Commercial farming	03
IV	Population	Growth, Distribution and Density	06
		Sex-ratio and Literacy.	
V	Mineral Resources, Industries and Transport	Production and Distribution: Iron Ore, Manganese, Gold, Coal, Petroleum, Natural Gas.	06
		Vocational factors of Industries	01

5. Mohammad & Izhar Hasan: Population Geography, New Delhi, 2008.
6. Sudepta Adhikari: Political Geography of India, Sharada, Allahabad, UP.

B.Sc. Semester – VI
Discipline Specific Elective (DSE) under CBCS
GY-Pr. F: Field Based Project Report

Unit	Title	Sub-unit	Hrs
I	Field work in geographical studies	Role, values and ethics of field work.	04
II	Selection and definition of the problem	Rural / Urban / Physical / Human / Environmental.	04
III	Field Techniques and collection of data	Sources of data: Secondary data - published and un-published Primary data – Observation and questioner and interview. Sampling	20
		Designing and field report: Aims and Objectives, Methodology, Analysis. Interpretation and Report writing.	24

The field survey based project report is compulsory, the students have to identify the problem and conduct a field survey under the supervision of a teacher allotted four hours in a week per the batch. The duration of the field work should not exceed 10 days. The prepared report shall be submitted to the Department before the commencement of practical examination.

References:

1. Cresswell J., 1994, Research Design, Qualitative and Quantitative approach, Sage Publications.
2. Dikshit R.D: 2003, The Art and Science of Geography, Integrated readings, Prentice Hall of India, New Delhi.
3. Evans M: 1988, Participant Observation, The Researcher as a Research Tool, in Qualitative Methods in Human Geography, 2nd ed. Eyles and Smith, Polity.
4. Mukharjee, Neela: 1993, Participatory Rural appraisal, Methodology, and application concept, Publs Co. New Delhi.
5. Mukharjee, Neela: 2002, Participatory learning and action, with 100 field methods Concept Pub. New Delhi.
6. Special Issues on Doing Field work, The Geographical Review 91:1.2 ,2001

B.Sc. Semester – VI
Generic Elective (GE-II) under CBCS
GY T F-III: Physical Geography of India

Unit	Title	Sub-unit	Hrs
I	Spatial and space Relations	Location, Size, Extent and Land and Water frontiers of India	02
II	Physical features and Climatic Regions of India	Physiographic Divisions, Drainage, Climate, Soils and Natural Vegetation. Climatic regions of India according to Koppen's scheme	20
III	Natural Hazards and Disaster	Earth Quakes, Cyclones, Floods, Droughts, Tsunami, Landslides and Disaster Management	8

References:

1. Gopal Singh: A Geography of India, Atmaram & Sons New Delhi.
2. ICAR: Cropping pattern in India, 1974.
3. Mathus S.M: Physical geography of India, NBT, 1991.
4. Ranganath : Regional and Economic Geography of India, (Kan. Ver.) Vidyanidhi Prakashan Gadag, 2006.
5. Ranjit Thirtha: Geography of India, Raniat, Jaipur, 1996.
6. Khullar D.R: India A Comprehensive Geography, Kalyani Pub. Ludhiana, 2000.
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B.A. Semester – VI
Skill Enhancement Course (SEC-II) under CBCS
GY-T F-IV: Basics of Remote Sensing

Unit	Title	Sub-unit	Hrs
I	Remote Sensing and Arial Photography	Definition, Development, Platforms Principles, and Types of Remote Sensing Arial Photography	12
II	Satellite Remote Sensing	Principles, EMR Interaction with atmosphere and Earth surface; Satellites	10

		(Land sat and IRS) and Sensors	
III	Interpretation and Application of Remote Sensing	Land-use /Land Cover	08

Reference:

1. Campbell J. B, 2007: Introduction to Remote sensing, Guildford press
2. Jensen J. R, 2004: Introductory digital image processing: A Remote sensing perspective prentice hall.
3. Joseph G, 2005: Fundamentals of Remote sensing, United Press, India.
4. Lilley SandT.M. Kiefer R.W and Chipman J.W. 2004: Remote sensing and image interpretation, Wiley.
5. Nag P. and Kudra, M. 1998: Digital Remote Sensing, Concept, New-Delhi.
6. Rees W.G., 2001: Physical Principles of Remote Sensing, Cambridge University Press.
7. Singh R.B. and Murai S. :1998: Space Informatics for sustainable development, Oxford and IBH Pub.
8. Wolf P.R. and Dewit B.A., 2000: Elements of Photogrammetry : With applications in GIS Mc Graw Hills
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KARNATAK UNIVERSITY, DHARWAD

B.Sc. Programme

DRAFT SYLLABUS FOR

GEOGRAPHY (OPT.)

AS DISCIPLINE SPECIFIC COURSE (DSC) and

SKILL ENHANCEMENT COURSE (SEC)

UNDER

CHOICE BASED CREDIT SYSTEM (CBCS)

Effective from 2020-21

Preamble:

Nature has provided the most precious resources to the human beings, plants and animal wealth with five fundamental elements i.e. Land, Water, Air, Sun Radiation and Sky. Therefore, the life of these exists on the earth. The Mother Earth is the shelter of all these and accordingly distributed on the geographical space in the world. Geographic knowledge and information of the earth's features is the core subject to be understood. One should know about where the geographic features are? What are their surroundings? How are their spatial relationships pertaining to development and management of nation? Geography also presents the relationship between man and the environment. A fair knowledge and understanding of Geography build a bridge between these two. If any person fails in understanding Geography of the Earth and its environment, one cannot understand natural disasters and their control. Understanding about the dimensions of the earth, its system and subsystems and how they interact to perform a single system is very essential. Location, place names, human environment Interaction, movement, and region can be easily understood through Geography itself. How the physical space and human face are interacting? The physical space is interacted by the human activities then the space is a matter of spatial movement, spatial interaction, spatial mobility and spatial arrangement. The concept of efficiency, sufficiency and consistency are the matter to distinguish between the critical and non-critical zone resources. Therefore, the Geographical study enhances advancement in intelligence, efficiency, informed decision-making, science-based planning, resource accounting, evaluation, and communication. Recently, Geography has turned into technical and applied oriented subject dealing with space technology particularly , Remote Sensing, *Aerial photographs*, Geographical Information Systems, Global Positioning System & Digital Cartographic Methods. This helps in gathering spatial information to planning and decision-making process to solve environmental, political, economic and social issues on the different geographical regions in the world.

The syllabus of CBCS of B.A. Geography course has been designed to understand the knowledge not only in the academic point of view but also for competitive examinations which helps the students who are going to prepare Civil Service Examinations to become Class-I & Class-II Officers state as well as national level. Since, the discipline is technically and technologically sound with latest changing tools and instruments will enhance the quality education and will have better placement. The students after their Degree will have multi-options to decide whether to go ahead with Civil Service, teaching, research or geospatial technological fields. All the areas have got equal opportunities to provide them placements.

Objectives of the Course:

- To study the living conditions of the people in different parts of the globe.
- To enable and acquiring a knowledge of natural resources along with human resource.
- To understand the physical space and human face intervention changes the environment.
- To develop an understanding of how environment and climatic factors have influenced the life.
- To develop an understanding of basic concepts, principles and theories relating to geographical phenomena.
- To develop scientific attitude and to advance the ability to draw valid conclusions and independent thinking.
- To make students more competent and resourceful in the field of teaching, research, geospatial fields and competitive examinations.

SCHEME OF EXAMINATION

III. Theory Examination

- (v) Examination will be conducted at the end of each semester.
- (vi) Each theory paper carries a maximum of 100 marks (80+20) and duration of examination hour is 3 hours.

- (vii) Each theory Question paper will have three sections, consisting of 2, 5 & 10 marks respectively.

- (viii) In first section of QP, candidates have to answer any 5 and answer should not exceed more than 50 words.

In second section of QP, candidates will have to answer any 4 questions and answer should not exceed 200 words.

In third section of QP, candidates have to answer any 4 and answer should not exceed more than 500 words.

Questions for all three sections have to be set from the prescribed syllabus.

IV. Practical Examination:

- (v) Each practical examination is of 3 hours' duration with a maximum of 50 marks of which 40 marks are allotted to examination and 10 marks for internal assessment. And submission of practical records is compulsory.

i

- (vi) The practical examination is to be conducted in batches in accordance with students offered the examination.
- (vii) There will be one internal examiner and one external examiner to conduct the practical examination for each batch.
- (viii) Semester I – VI practical examinations, there will be four questions and all are compulsory.

CBCS syllabus for B.Sc Degree course in Geography (opt.) from I to VI Semester is as follows:

B.Sc. (General) Programme structure under CBCS

Semester	*Core			Elective			Ability Enhancement Course						Total Credits
	DSC			**DSE			***SEC			AECC			
	Course	L+T+P	Credit	Course	L+T+P	Credit	Course	L+T+P	Credit	Course	L+T+P	Credit	
I	DSC-1A	4+0+4	4+2=6							English-1	2+1+0	2+1=3	26
	DSC-2A	4+0+4	4+2=6							MIL-1	2+1+0	2+1=3	
	DSC-3A	4+0+4	4+2=6							ENVIRONMENTAL SCIENCE	2+0+0	2+0=2	
II	DSC-1B	4+0+4	4+2=6							English-2	2+1+0	2+1=3	26
	DSC-2B	4+0+4	4+2=6							MIL-2	2+1+0	2+1=3	
	DSC-3B	4+0+4	4+2=6							CONSTITUTION OF INDIA	2+0+0	2+0=2	
III	DSC-1C	4+0+4	4+2=6							English-3	2+1+0	2+1=3	24
	DSC-2C	4+0+4	4+2=6							MIL-3	2+1+0	2+1=3	
	DSC-3C	4+0+4	4+2=6										
IV	DSC-1D	4+0+4	4+2=6							English-4	2+1=0	2+1=3	24
	DSC-2D	4+0+4	4+2=6							MIL-4	2+1=0	2+1=3	
	DSC-3D	4+0+4	4+2=6										
V				DSE-1E	4+0+4	4+2=6	SEC-1E	2+0+0	2				22
				DSE-2E	4+0+4	4+2=6	SEC-2E	2+0+0	2				
				DSE-3E	4+0+4	4+2=6							
VI				DSE-1F	4+0+4	4+2=6	SEC-1F	2+0+0	2				22
				DSE-2F	4+0+4	4+2=6	SEC-2F	2+0+0	2				
				DSE-3F	4+0+4	4+2=6							
TOTAL			72			36			08			28	144

L+T+P= Lecturing in Theory + Tutorial + Practical Hours per Week (no tutorial for practical subject).

* If the core course is Mathematics, there shall be two papers of 75 marks each. Then L+T+P = (2x3)+(2x1)+0, but credit shall be 6 only.

** Each DSE shall have at least two papers and student shall choose any one paper from each DSE.

*** SEC 1 & 2 shall be from all three DSC but student shall choose any two in each semester (SEC may be practical or theory for 2 credits only).

Karnatak University, Dharwad
CBCS syllabus for Under Graduate Programme in Geography (opt.) as
DISCIPLINE SPECIFIC COURSE (DSC)
Effective from 2020-21

Sem Ester	Theory/ Practica I	Subject Code	Instruction hour per week	Total Syllabus Hrs/ Sem	Duration of Exam.	Internal Assessment Marks	Sem final Exam. Marks	Total Marks	Credits
I	Theory	DSC (GYT: A)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: A)	04 hrs	52	03 hrs	10	40	50	02
II	Theory	DSC (GYT: B)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: B)	04 hrs	52	03 hrs	10	40	50	02
III	Theory	DSC (GYT: C)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: C)	04 hrs	52	03 hrs	10	40	50	02
IV	Theory	DSC (GYT: D)	04 hrs	60	03 hrs	20	80	100	04
	Practical	DSC (GYPr: D)	04 hrs	52	03 hrs	10	40	50	02
V	*Theory P-I /P- II	DSE (GYT: E-I GYT: E-II)	04 hrs / 04 hrs	60/60	03 hrs	20	80	100	04
	Practical	DSE (GY Pr: E)	04 hrs	52	03 hrs	10	40	50	02
VI	*Theory P-I /P- II	DSE (GYT: F-I GYT: F-II)	04 hrs / 04 hrs	60/60	03 hrs	20	80	100	04
	Practical	DSE (GYPr: F-I)	04 hrs	52	03 hrs	10	40	50	02
Total			48 hrs	672/120		180	720	900	36

*Candidate shall choose either paper –I or P-II but not both in DSE theory.

SKILL ENHANCEMENT COURSE (SEC) for Geography opted as DSC

Sem Ester	Theory	Subject Code	Instruction hour per week	Total Syllabus Hrs/Sem	Duration of Exam.	Internal Assessment Marks	Sem final Exam. Marks	Total Marks	Credits
V	Theory	SEC-I (GY- T: E-III)	02 hrs	30	1.5 hrs	10	40	50	02
V	Practical	SEC- II	02 hrs	30	1.5 hrs	10	40	50	02

		GY- Pr.: E-I)							
VI	Theory	SEC- I (GY T : F-III)	02 hrs	30	1.5 hrs	10	40	50	02
VI	Theory	SEC- I (GY T : F-IV)	02 hrs	30	1.5 hrs	10	40	50	02
Total			08 hrs	120		40	160	200	08

Particulars of the Semester wise Theory and Practical Papers and Paper Code of B.Sc. Course.

Semester	Paper Code	Title of the Paper	Course
I	GY T A	Physical Geography	DSC
	GY Pr. A	Scale and Maps	DSC
II	GY T B	Human Geography	DSC
	GY Pr. B	Interpretation of Indian Daily Weather Maps	DSC
III	GY T C	Regional Geography of Karnataka	DSC
	GY Pr. C	Interpretation of Topographical Maps	DSC
IV	GY T D	Environmental Geography	DSC
	GY Pr. D	Map Projections	DSC
V	GY T E-I	Regional Geography of India	DSE
	GY T E-II	Geography of Settlements	DSE
	GY Pr. E	Basic Statistics	DSE
	GY T E-III	Regional Planning & Development	SEC-I
	GY Pr. E –II	Quantitative Geography	SEC-II
VI	GY T F-I	Economic Geography of the World	DSE
	GY T F-II	Population Geography	DSE
	GY Pr. F	Field Based Project report	DSE
	GY T F-III	Basics of Remote Sensing	SEC-I
	GY T F –IV	Natural and Man Induced Hazards	SEC-II

Note: All the DSC Courses are compulsory. Each DSE shall have at least two papers and student shall choose any one paper from each DSE and Practical is compulsory.

SEC Theory/Practical is compulsory of these two semesters.

The Practical batch is to be in accordance with University Norms.

B. Sc. Semester – I
Discipline Specific Course (DSC) under CBCS
GY- T A: PHYSICAL GEOGRAPHY

Credits: I. Theory : 04 Theory class 4hrs /wk. Total theory: 60 Lectures
80 marks for Sem end Examination (3 hrs) & 20 marks IA
II. Practical : 02 Practical: 4 hrs./wk. Total Practical: 52 hrs.
40 marks for Sem end Examination (3 hrs) & 10 marks IA
Total Credits : 06 Total Theory marks 100 and Practical marks 50

Unit	Title	Sub-unit	Hrs
I	Introduction to Physical Geography	Meaning, Field and Scope	04
II	Origin of the earth	Nebular and Tidal Theory	04
III	Lithosphere	Interior of the earth.	20
		Continental drift theory of Wegener and Plate tectonic theory.	
		Formations and types of Volcanoes, Earthquakes and Rocks.	
		Geomorphic Agents and Process of Denudations: River, Glacier Underground water and Winds.	
IV	Atmosphere	Composition and Structure.	20
		Insolation: Factors affecting the distribution of atmospheric temperature. Vertical and Horizontal distribution of atmospheric temperature	
		Atmospheric Pressure: Factors affecting the atmospheric Pressure. Vertical and horizontal distribution of pressure and World Pressure belts.	
		Wind System: Planetary, Seasonal, Local and Variable Winds (cyclones and anticyclones).	
		Precipitation: Humidity and Types of Rainfall.	
V	Hydrosphere	The Relief of the Oceans: Continental Shelf, Continental Slope, Deep Sea Plain and Troughs.	12
		Tides and ocean currents: Indian, Pacific and Atlantic	
		Salinity and temperature of Oceans: Atlantic,	

	Pacific and Indian.	
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References:

11. Conserva H.T (2004): Illustrated Dictionary of Physical Geography, Author House,
12. Gabler R.E , Peterson J.F and Trapasso L.M (2007): Essentials of Physical Geography (8th edition) Thompson Books / Cole USA.
13. Garrett N (2000) Advanced Geography, Oxford University Press.
14. Goudie A (1984): The Nature of Environment: An advanced Physical Geography, Basil Husain M (2002): Fundamentals of Physical Geography, Rawat Publications, Jaipur.
15. Monkhouse F.J(2009): Principles of Physical Geography, Platinim Publishers,
16. Strahler A N and Strahler A H (2008): Physical Geography, John Wiley & Sons New
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B.Sc. Semester – I
Discipline Specific Course (DSC) under CBCS
GY-Pr A: SCALES AND MAPS

Unit	Title	Sub-unit	Hrs
I	Scales and Maps	Scales and Maps as a tools in Geography	04
II	Scales	Introduction: Definition, Types, Methods of Representation and uses of scales.	28
		Conversion of scales: Representative Fraction (RF) to Verbal scale and Verbal scale to Representative Fraction (RF).	
		Construction of scales: Graphical (Plain), Comparative, Pace, Time and Diagonal.	
III	Maps	Introduction: Definition, Types and Importance of Maps.	20

		Enlargement and Reduction of Maps by Graphical method (02 exercise each).	
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References:

12. Gopal Singh: Map work and Practical Geography, 3rd ed. Vikas Publishing Houde, New Delhi.
13. Gupta K and Tyagi V.C : Working with Maps, Survey of India, Dept. of Sci. and Technology, Govt. of India, Dehra Dun 1992.
14. John and Keats: Cartographic design and production, 2nd ed. 1989, John wiley, New York.
15. Mishra R.P: Fundamentals of Cartography,1969,Prasaranga, University of Mysore.
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20. Singh R.L: Elements of Practical Geography, Kalyani Publishers, New Delhi.
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B.Sc. Semester – II
Discipline Specific Course (DSC) under CBCS
GY-T B: Human Geography

Unit	Title	Sub-unit	Hrs
I	Introduction to Human Geography	Introduction: Definition, Field and Scope of Human Geography. Branches of Human geography	08
II	Conceptual approaches of Man-Environmental Relationship	Environmental determinism, Possibilism and Neo-determinism	02
III	Social and Cultural Geography	Major races of the world: Classification and distribution of Caucasoid, Mangoloid, Negroid and Australoid. Culture and Religion of the World.	23
		Settlements: Types and Patterns of Rural settlements. Definition of urban places. The origin of towns and functional classification of towns.	
		Urbanization: Trends and Patterns of World Urbanizations	
IV	Tribes: Habitat and Economy	Major tribes of the world (Primitive people): Pygmies, Bushman, Eskimos, Semang and sakais.	19
		Major Indian Tribes: Todas, Bills, Gondas, Nagas and Santals.	
V	Population Geography	Growth and distribution of world population.	08

	Population composition: Sex-ratio and Literacy rate.	
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References:

13. Dickens and Pitts: Introduction to Human Geography, 1963.
14. Harm D. Blij: Human and Economic Geography, Mac Millan, New York, 1992.
15. Husain M: Human Geography, Rawat Publications, Jaipur, 2003.
16. Nellson, Gabler & Vining Human: Human Geography, People, Culture and Land
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18. Norris and Haring: Political Geography, Charles E. Merrill Publishing Company.
19. Ranganath: Principals of Human Geography (Kan Var) Vidyanidhi , Gadag, 2002.
20. Rubenstein J.M: An Introduction to Human Geography, MacMillon Publishing
21. J. A. ©. U. E. q. b. a. A. E. P. A. ' ' K. E. U. E. A. V. A. A. , 0
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24. q. A. J. A. ©. U. E. q. b. a. a. A. E. P. A. ' ' K. E. U. E. A. V. A. A. , 0

B.Sc. Semester – II
Discipline Specific Course (DSC) under CBCS
GY-Pr B: Interpretations of Indian Daily Weather Reports

Unit	Title	Sub-unit	Hrs
I	Construction of Graphs	Single and double Line graph.	12
		Single and double Bar graph.	
		Climograph.	
		Hyther Graph.	
		Ergo Graph.	
II	Diagrams and Thematic Maps	Pie, Traffic-flow, Spheres and Wind-Rose	12
		Choropleth and Dot Maps	
III	Weather Instruments and IMD Weather Maps	Thermometer – Wet Bulb and Dry Thermometer.	12
		Barometer –Aneroid Barometer.	
		Rain gauge and Cup Anemometer	
		Weather Signs and Symbols	04
		Interpretation of Indian Daily Weather Report – 4 exercises (One exercise from each season).	12

References:

13. Gopal Singh: Map work and Practical Geography, 3rd ed. Vikas Publishing Houde, New Delhi.
14. Gupta K and Tyagi V.C : Working with Maps, Survey of India, Dept. of Sci. and Technology, Govt. of India, Dehra Dun 1992.
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17. Mishra R.P: Fundamentals of Cartography,1969,Prasaranga, University of Mysore.
18. Monkhouse F.J and : Maps and Diagrams, Wilkinson H.RMathuen and Co. Ltd. London,
19. Phyllis Dink: Map work, 10th ed. Atma Ram and Sons, Delhi 1969.
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22. Singh R.L: Elements of Practical Geography, Kalyani Publishers, New Delhi.
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B.Sc. Semester – III
Discipline Specific Course (DSC) under CBCS
GY-T C: REGIONAL GEOGRAPHY OF KARNATAKA

Unit	Title	Sub-unit	Hrs
I	Physical Aspects	Location, Size, Extent	16
		Physiographic divisions.	
		Climate, Rivers, Soils and Vegetation.	
II	Agriculture and River Valley Projects	River Valley Projects: Krishna, Malaprabha, Ghataprabha, Tunga Bhadra and Cauvery Rivers.	22
		River Water Dispute: Cauvery, Krishna and Kalasa Banduri.	
		Irrigation: Sources and Types	
		Types of Agriculture.	
		Cultivation, Distribution and Production of major Crops: Food crops: Paddy Ragi, Jowar and Wheat. Commercial crops: Cotton, Sugar Cane, Tobacco, Chilli. Horticulture Crops : Coffee and Tea.	
III	Mineral Resources and Industries	Distribution and Production of Mineral Resources: Iron ore, Manganese Bauxite and Gold.	10
		Distribution and Production of major industries: Iron and Steel, Sugar, Cotton textile and Cement Industries.	
IV	Transportation	Patterns of Road and Railway, Ports and Harbours.	05

15. Jacki Smith B.A (ed): Dictionary of Geography, Cosmo Publications, New Delhi
16. John and Keats: Cartographic design and production, 2nd ed. 1989, John wiley, NY
17. Mishra R.P: Fundamentals of Cartography, 1969, Prasaranga, University of Mysore.
18. Monkhouse F.J and : Maps and Diagrams, Wilkinson H.R Mathuen and Co. Ltd. London,
19. Phyllis Dink: Map work, 10th ed. Atma Ram and Sons, Delhi 1969.
20. Raisz E: General Geography, 1948, Tata, Mc-Grow-Hill New York.
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B.Sc. Semester – IV
Discipline Specific Course (DSC) under CBCS
GY-T D: Environmental Geography

Unit	Title	Sub-unit	Hrs
I	Introduction	Meaning and components of environment. Field and scope of environmental Geography	05
II	Ecosystem	Types, Structure and Functions - Productivity, Food-chain, Food-Web, Ecological Pyramid. Bio-Geo-Chemical cycle – Hydrological, Carbon, Nitrogen Oxygen and Energy flow in the eco-system.	20
III	Bio-Diversity	Types and Uses of Bio-Diversity, Threats to Bio-Diversity. Endangered Species of India. Conservation of Bio-Diversity.	13
IV	Global Warming and Environmental Pollution	Green House effects. Ozone layer depletion- Causes, Consequences and protection	05
		Causes, Effects and Measures to control the pollution : Air, Water Soil and Solid waste.	12
V	Conservation and Management of Environment	National and International: Policies, Rio Summit, Kyoto Declaration and Swatch Bharat Abhiyan	05

References:

12. Agarawal K.C: Environmental Biology, Nidhi Pub. Bikaner, 2001.
13. Chausasia B.P: Environmental Pollution, Consequences and Measures.
14. Mathur H.S: Environmental Resources, The Crises of Development.
15. Odum E.P: Fundamentals of Ecology, WBSaunders Co. London, 1971.
16. Saxena H.M: Environmental Geography, Rawat Pub. Jaipur, 1999.
17. Sharma P.D: Ecology and Environment: Rastogi Pub. New Delhi, 1999.
18. Strahler and Strahler: Geography and Mans Environment, John Wiley New York,
19. Heywood V.H. & Warson R.T: Global Bio-Diversity Assessment, CUP, 1995.
20. Darsh M.C: Fundamentals of Ecology, Tata McGrow Hills New Delhi, 2002.

21. qÁ. J .i.n.EÁiÁPÁ ¥j ,bÁ . .KEUÉÁ¼ÁÁ ,b
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B.Sc. Semester – IV
Discipline Specific Course (DSC) under CBCS
GY-Pr D: Map Projections

Unit	Title	Sub-unit	Hrs
I	Introduction of Map projection	Meaning, Classification, importance, Properties and Uses of Map Projections.	04
II	Map Projections: Properties, Uses and Graphical Construction	Cylindrical Projections: Simple Cylindrical, Cylindrical – equal area Mercator’s Projection.	12
		Conical Projections: Conical Projection with one standard parallels Bonne’s Projection.	12
		Zenith Projections: Polar Zenith equal area, Gnomonic Stereographic and Orthographic	12
III	Conventional Projections	Sinusoidal Projection and Millweids Projection	12

References:

10. Salar Masood M: Map Projections, Rao and Raghavam Co. Mysore.
11. Ranganath : Map Projections (Kan. Ver.) Chetana Book House, Mysore.
12. Ervin Raisz: General Cartography, Mc Graw Hill Book Company,
13. Singh R.L: Elements of Practical Geography, Allahabad.
14. George P. Kellaway: Methuen & Co. Ltd. London.
15. Gopal Singh: Map work and Practical Geography, Surjeet Pub. New Delhi.
16. S.S.Nanjannavar & M.F.Karennavar: Practical Geography.
17. Dr. S.S.Kadaramandalagi: Practical Geography.
18. Prof. P.Mallappa :Map Projections. Chetana Book House, Mysore

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B.Sc. Semester – V
Discipline Specific Elective (DSE) under CBCS
GY-T E-II: Geography of Settlements

Unit	Title	Sub-unit	Hrs
I	Introduction	Meaning, Definition, Scope and Nature of Settlement Geography	08
II	Rural Settlements	Factors affecting the distribution of rural settlements. Origin and evolution of rural settlements.	20
		Types and Patterns of Rural Settlements.	
		Size and spacing of Rural settlements.	
		Morphology of Rural settlements – Physical, Functional and social.	
III	Govt. Recent Policies and Programmes for Rural Development	Sanitation and Water supply Program, Pradhana Mantri Grama Sadak Yojana, Pradhana Mantri Grameena Avasa Yojana, Pradhana Mantri Ujvala Yojana and Deen Dayal Upadhya Grameena Koushlya Yojana	05
IV	Urban settlements	Definition of urban places, origin of towns and functional classification of towns.	20
		Theories of Urban Land use: Concentric Zone theory, Multi Nuclei theory and Sector Theory	
		Urban Hierarchy, Primate City concept, Central place theory of Christler	
		Rural – Urban Continuum. Characteristics and development of Urban.Fringe and Urban Slums.	
V	Govt. Recent Policies and Programmes for Urban Development	Smart City Mission, National Urban Livelihood Mission, National Heritage City Development & Angementation Yojana (HRIDAY), Swatch Bharat Mission, Amruta urban development scheme.	07
		Urban problems and planning.	

Reference:

9. Husain M: Human Geography, Rawat Pub. Jaipur, 2003.
10. Nellson, Gabler & Vining: Human Geography, People Culture and Landscapes, 1995.
11. Norris and Haring: Political Geography, Charles E. Merrill Pub. Co.
12. Dr. Ranganath: Principles of Human Geography (Kan. Ver.) Vidyanidhi, Gadag,
13. Singh R.Y: Geography of Settlements, Rawat Pub. New Delhi, 2007.
14. Harold Carter: The study of Urban Geography, 1982.

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B.Sc. Semester – V
Discipline Specific Elective (DSE) under CBCS
GY-Pr E: Basic Statistics

Unit	Title	Sub-unit	Hrs
I	Introduction	Meaning, Importance and Limitations	04
II	Methods of Samplings, Sources of Data and Frequency Distribution	Sampling : Definition and Types	24
		Sources of Data : Primary and Secondary Data and Data Tabulation	
		Frequency Distribution : Histogram, Frequency Polygon, Frequency Curve and Ogive Curves	
III	Measures of Central Tendency and Dispersion	Measures of Central Tendency : Mean, Median and Mode	24
		Measures of Dispersion : Range, Quartile Deviation and Standard Deviation	

References:

6. Singh R.L: Elements of Practical Geography, Kalyani Publishers, New Delhi, 1979.
7. Gopal Singh: Map Work and Practical geography, 2nd ed. Vikas Pub. New Delhi.
8. Mishra R.P: Fundamentals of Cartography: Prasaranga, Mysore University, 1969.
9. Zamir Alvi: Statistical geography, Methods and applications, Rawat Pub. Jaipur, 1995.
10. D.V. Jangannavar: Elements of statistics.

B.Sc. Semester – V
Skill Enhancement Course (SEC-I) under CBCS
GY T E-III Regional Planning and Development

Unit	Title	Sub-unit	Hrs
I	Introduction	Concept, Need for regional planning and Types of Planning	08
II	Regions and Models of Regional Planning	Concept, Types and delineation of Regions: Formal and Functional Regions, Models of Regional Planning: Growth Pole Theory and growth foci concept in Indian context.	04 04
III	Backward regions and regional plans and NITI Aayoga	Planning for Tribal area Development, Planning for agriculture regions, planning for Drought prone area and DVC. The success story and the failures; NITI Aayoga.	10 04

Reference:

14. Blij H.J. De, 1971: Geography: Regions and concepts, John Wiley and Sons
15. Claval P.I., 1998: An Introduction to Regional Geography, Black Well Publishers, Oxford and Massachusetts.
16. Fried Mann J. and Alonso W. (1975): Regional Policy – Readings in Theory and Applications, MIT Press, Massachusetts.
17. Gore C.G, 1984: Regions in Question space, Development Theory and Regional Policy, Methuen, London.
18. D.N.Nath (2009) :Regional Planning in India
19. Mahesh Chand and Vinay kumar Puri. (1983): Regional Planning in India
20. Johnson E.A.J. 1970: The organization of space in development countries, MIT Press
21. Peet R., 1999 : Theories of Development, The Guilford Press , New York.
22. Ray Choudhari (2001):An Introduction to Development and Regional Planning with special reference to India
23. R.P.Misra,K.V.Sundaram and V.L.S. Prakasa Rao: (1976)Regional Planning In India
24. R.P.Misra, D.V.Urs and V.K.Natraj: 1978 Regional planning and National Developmnet
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B.Sc. Semester – V
Skill Enhancement Course (SEC-II) under CBCS
GY T E-IV: Quantitative Techniques in Geography

Unit	Title	Sub-unit	Hrs
I	Introduction	Quantitative Revolution in Geography Importance of quantities techniques in geography.	04
II	Nearest Neighbour Techniques and Measures of Inequality and Relationships	To measure the spatial distribution of points.	04
		Lorenz Curve : To measure the inequality of any phenomena.	14
		Correlation technique : The relationship between two variables (Karl Pearson's and Spearman Method).	
III	Agricultural Productivity and Functional classifications of Towns	Rank-size Rule : Relationship of city population and its rank.	
		Agriculture important output ratio	04
		Distinguish of towns based on functions	04

References:

1. Aslam Ahemad: Statistical Methods in Geography, Rajesh Pub. New Delhi.
2. Najma Khan: Quantitative method in Geographical Research, Concept pub. New Delhi
3. P.Hegget: & Chorley: Network analysis in Geography, Edward Pub, 1969.
4. P.Hegget: Locational Analysis in Human Geography, 1965, Edward pub.
5. Hammond R & Mc Cullagh: 1977, Quantitative techniques in Geography, Clarendon
6. Godfry: 1977, Quantitative methods for managers, Armond Pub. London.
7. Gregory S: 1978, Statistical Methods and the geographers, Longman.
8. Johnson R.J: 1978, Multi-variate statistical analysis in geography, Longman.
9. Kothari C.R: 1984, Quantitative techniques, Vikas Pub. Ned Dwlhi.
10. Duncon O.D: 1957, The Measurement of Population distribution, Population studies

B.Sc. Semester – VI
Discipline Specific Elective (DSE) under CBCS
GY-T F-I: Economic Geography of the World.

Unit	Title	Sub-unit	Hrs
I	Economic Geography: An introduction	Definition, Scope and Nature of economic Geography	10
		Approaches, Recent trends in Economic Geography.	
II	Physical Aspects and Natural Regions of the world	Physiographic divisions, Drainage, Climate, and Natural Vegetation.	20
		Natural Regions of the World: Equatorial, Monsoon, Desert, Grassland and Tundra.	05
III	Agriculture	Types of farming :Shifting cultivation, Subsistence and Commercial farming	03
IV	Population	Growth, Distribution and Density	06
		Sex-ratio and Literacy.	
V	Mineral Resources, Industries and Transport	Production and Distribution: Iron Ore, Manganese, Gold, Coal, Petroleum, Natural Gas.	06
		Vocational factors of Industries	01
		Distribution and Production of major industries: Iron and Steel, Cotton Textile.	03
		Ocean Transport: North Atlantic Route, Suez, Asiatic Route, The cape of Good Hope and the Panama Canal Route.	06

Note: Students can choose any one from the Discipline Specific Elective paper either Economic Geography of the world or Population Geography

References:

8. Alexander and Hartshorne: Economic Geography, Prentice Hall, 2nd Edition, 2000.
9. Guha and Chattoraj: A New Approach to Economic Geography.
10. Khanna and Gupts: World Resources and Trade, S. Chand & Co. New Delhi.
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B.Sc. Semester – VI
Discipline Specific Elective (DSE) under CBCS
GY-T F-II: Population Geography

Unit	Title	Sub-unit	Hrs
I	Introduction to Population Geography	Definition, Nature and Scope. Approaches and sources of Population data.	10
II	Population growth and Distribution	Growth, Distribution and Density of World Population, with special Reference to India.	22
		Factors affecting the distribution of population.	
		Demographic Transition.	
		Fertility and Mortality: Factors affecting, Cause and Consequences.	
III	Population Composition	Sex-Ratio and Literacy	18
	Migration: Causes, Types and Consequences.		
IV	Population Theories	Malthus and Karl Henrich Marx	05
V	Government Policies	India's Population Policies	05

References:

7. Narris and Haring: Political Geography, E. Merrill Pub. Co.
8. Dixit R.D: Political Geography, PHI, New Delhi, 2008.
9. Dr. Ranganath: Principals of Human Geography, Vidyanidhi, Gadag, 2008.
10. Chandana R.C: Geography of Population, Kalyani Pub. New Delhi, 2008.
11. Mohammad & Izhar Hasan: Population Geography, New Delhi, 2008.
12. Sudeepta Adhikari: Political Geography of India, Sharada, Allahabad, UP.

B.Sc. Semester – VI
Discipline Specific Elective (DSE) under CBCS
GY-Pr. F: Field Based Project Report

Unit	Title	Sub-unit	Hrs
I	Field work in geographical studies	Role, values and ethics of field work.	04
II	Selection and definition of the problem	Rural / Urban / Physical / Human / Environmental.	04
III	Field Techniques and collection of data	Sources of data: Secondary data - published and un-published Primary data – Observation and questioner and interview. Sampling	20
		Designing and field report: Aims and Objectives, Methodology, Analysis. Interpretation and Report writing.	24

The field survey based project report is compulsory, the students have to identify the problem and conduct a field survey under the supervision of a teacher allotted four hours in a week per the batch. The duration of the field work should not exceed 10 days. The prepared report shall be submitted to the Department before the commencement of practical examination.

References:

7. Cresswell J., 1994, Research Design, Qualitative and Quantitative approach, Sage Publications.
8. Dikshit R.D: 2003, The Art and Science of Geography, Integrated readings, Prentice Hall of India, New Delhi.
9. Evans M: 1988, Participant Observation, The Researcher as a Research Tool, in Qualitative Methods in Human Geography, 2nd ed. Eyles and Smith, Polity.
10. Mukharjee, Neela: 1993, Participatory Rural appraisal, Methodology, and application concept, Publs Co. New Delhi.
11. Mukharjee, Neela: 2002, Participatory learning and action, with 100 field methods Concept Pub. New Delhi.
12. Special Issues on Doing Field work, The Geographical Review 91:1.2 ,2001

B.sc. Semester – VI
Skill Enhancement Course (SEC-I) under CBCS
GY-T F-III: Basics of Remote Sensing

Unit	Title	Sub-unit	Hrs
I	Remote Sensing and Aerial Photography	Definition, Development, Platforms Principles, and Types of Remote Sensing Aerial Photography	12
II	Satellite Remote Sensing	Principles, EMR Interaction with atmosphere and Earth surface; Satellites (Land sat and IRS) and Sensors	10
III	Interpretation and Application of Remote Sensing	Land-use /Land Cover	08

Reference:

10. Campbell J. B, 2007: Introduction to Remote sensing, Guildford press
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B.Sc. Semester – VI
Skill Enhancement Course (SEC-II) under CBCS
GY T F-IV: Natural and Man Induced Hazard

Unit	Title	Sub-unit	Hrs
I	Introduction to Disaster	Meaning, concepts and Types of disaster.	02
II	Natural Hazard Management	Earthquake , Landslide, Land subsidence, Thunderstorms, Flood, Riverbank / coastal erosion, Fire, Tsunami, Elnino, Lanina and Cyclones.	14
III	Man induced Hazard Management	Population explosion ,Earthquake ,Road / Railway accident, Industrial accident (Gas leakage), Structural collapse, Environmental Pollution, Biohazard and COVID-19.	14

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WEBSITES:

AGU landslide Blog: blogs.agu.org/landslideblog

Dartmouth Flood Observatory: floodobservatory.colorado.edu

Disaster News Network: secure.disasternews.net