

ପାଠ୍ୟକର୍ତ୍ତା ବ୍ୟାକ୍ସନ ଏବଂ ପାଠ୍ୟକର୍ତ୍ତାଙ୍କ ବ୍ୟାକ୍ସନ

DEPARTMENT OF GEOGRAPHY,

SANTALI VERNACULAR, BANKURA UNIVERSITY,

BANKURA, WEST BENGAL, 722155

Draft CBCS Syllabus for 3 -Year B.A/B.SC Undergraduate Honours Course in GEOGRAPHY, Santali Vernacular , Session 2020-2021

INTRODUCTION:

In compliance with recent directives from the University Grants Commission, the undergraduate syllabus for Geography is reframed into Choice Based Credit System largely following the model syllabus prepared by the West Bengal State Council of Higher Education.

The main objective of this new curriculum is to give the students a holistic understanding of the subject, putting equal weightage to the core content and techniques used in Geography. The syllabus tries to give equal importance to the two main branches of Geography: Physical and Human.

The principal goal of the syllabus is to enable the students to secure a job at the end of the undergraduate programme. Keeping this in mind and in tune with the changing nature of Geography, adequate emphasis is rendered on applied aspects of the subject such as emerging techniques of mapping and field-based data generation, especially in the honours course. The syllabus emphasizes on development of basic skills of the subject, so that everyone need not go for higher studies in search of professional engagement or employment.

Aims and objectives:

Geography is the study of places and the relationships between people and their environments. Geographers explore both the physical properties of Earth's surface and the human societies spread across it. They also examine how human culture interacts with the natural environment and the way those locations and places can have an impact on people. Geography seeks to understand where things are found, why they are there, and how they develop and change over time. The study of the diverse environments, places, and spaces of Earth's surface and their interactions. It seeks to answer the questions of why things are as they are where they are. The modern academic discipline of geography is rooted in ancient practice, concerned with the characteristics of places, in particular their natural environments and

Learning Outcomes:

This syllabus is designed to impart basic knowledge on geography as a spatial science and train the undergraduates to secure employment in the sectors of geospatial analysis, development and planning, mapping and surveying.

Programme specific Outcomes:

1. Fostering the ability of the students to encounter practical problems with theoretical knowledge in Geography and Environment.
2. Promotion of research aptitude and field work aptitude as well as laboratory based practical works for the students of Geography.
3. Capacity enhancement of the students in spatial mapping on digital platform for the Geographical research and studies. peoples, as well as the relations between the two.

Programme Career Opportunities:

- 1 . Orientation of the students of Geography to develop competitive examinations aptitude among them including NET / SET/ and other professional jobs.
- 2 . Preparing students for Higher Academic programmes for institutes of National and International repute.
- 3 . On completion of the M.A/ M.SC in Geography, students are able to get absorbed in various Govt Departments (like planning and developmental commissions, forestry, environmental, and disaster management departments) travel agencies, manufacturing firms, etc. They can be cartographer (NATMO), surveyor (Survey of India), GIS and Remote Sensing experts, environmental planner, Environment Reporter, urban and regional planner, transportation manager, Teacher/Professor etc.

Course curriculum

SEMESTER-I

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec	Tu.	Pr.
SH/GEO/ 101/C-1T	Geotectonics and Geomorphology	6	10	40	50	5	1	-
SH/GEO/ 102/C-2P	Cartographic Techniques	T-4 P-2	10	25 15	50	4	-	4
SH/GEO/ 103/GE-1	Other than Geography Students C-1:Physical Basisof Earth	6	10	40	50	5	1	-
ACSHP/104/ AECC-1	Environmental Studies		4	10	40			
Total in Semester -I		22	40	160	200			

SEMESTER-II

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/GEO/ 201/C-3T	Human Geography	6	10	40	50	5	1	-
SH/GEO/ 202/C-4P	Cartograms and Thematic Mapping	T-4 P-2	10	25 15	50	4	-	4
SH/GEO/ 203/GE-2	Other than Geography Students C-2:Human Geography	6	10	40	50	5	1	-
ACSHP/204/ AECC-2	English/Hind/MIL	2	10	40	50			
Total in Semester -II		20	40	160	200			

SEMESTER-III

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/GEO/ 301/C-5	Climatology	6	10	40	50	5	1	-
SH/GEO/ 302/C-6	Geography of India	6	10	40	50	5	1	-
SH/GEO/303/ C-7	Statistical Methods in Geography	T-4 P-2	10	25 15	50	4	-	4
SH/GEO/ 304/GE-3	Otherthan Geography Students C-3:Maps & Diagrams	T-4 P-2	10	25 15	50	4	-	4
SH/GEO/ 305/SEC-1	Computer Basics and Computer Applications	2	10	40	50	-	-	4
Total in Semester -III			26	50	200	250		

SEMESTER-IV

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/GEO/401/C-8	Regional Planning and Development	6	10	40	50	5	1	-
SH/GEO/402/C-9	Geography of Economic Activities	6	10	40	50	5	1	-
SH/GEO/403/C-10	Environmental Geography	T-4 P-2	10	25 15	50	4	-	4
SH/GEO/404/GE-4	Otherthan Geography Students C-4:Economic Geography	6	10	40	50	6	-	-
SH/GEO/405/SEC-2	GIS and GPS	2	10	25 15	50	-	-	4
Total in Semester -IV		26	50	200	250			

SEMESTER-V

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total			
SH/GEO/501/C-11	Evolution of Geographical Thought	6	10	40	50	5	1	-
SH/GEO/502/C-12	Remote Sensing	T-4 P-2	10	25 15	50	4	-	4
SH/GEO/503/DSE-1	Hydrology and Oceanography	6	10	40	50	5	1	-
SH/GEO/504/DSE-2	Cultural and Settlement Geography	6	10	40	50	5	1	-
	Urban Geography							
Total in Semester -V		24	40	160	200			

SEMESTER –VI

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/GEO/ 601/C-13	Disaster Management	6	10	40	50	5	1	-
SH/GEO/ 602/C-14	Research Methodology and FieldWork	T-4 P-2	10 15	25 15	50	4	-	4
SH/GEO/ 603/DSE-3	Soil and Biogeography	6	10	40	50	5	1	-
SH/GEO/ 604/DSE-4	Population Geography	6	10	40	50	5	1	-
	Geography of Health and Wellbeing							
Total in Semester–VI		24	40	160	200			

SH=Science Honours, GEO = Geography, ACSHP= Arts Commerce ScienceHonours Pass, C= Core Course, AECC= Ability Enhancement Compulsory Course, SEC=Skill Enhancement Course, GE=Generic Elective, DSE=Discipline Specific Elective IA=Internal Assessment, ESE=End-Semester Examination, Lec.=Lecture,Tu.=Tutorial, and Pr.=Practical

Programme Structure: Choice Based Credit System (CBCS): Syllabus in Geography

Course details:

1. Core Subjects Syllabus

- 1.1 SHGEO/101/C-1T-Geotectonics and Geomorphology
- 1.2 SHGEO/102/C-2T-Cartographic Techniques
- 1.3 SHGEO/102/C-2P-Cartographic Techniques Lab
- 1.4 SHGEO/201/C-3T-Human Geography
- 1.5 SHGEO/202/C-4T-Cartograms and Thematic Mapping
- 1.6 SHGEO/202/C-4P-Cartograms and Thematic Mapping Lab
- 1.7 SHGEO/301/C-5T-Climatology
- 1.8 SHGEO/303/C-6T-Geography of India
- 1.9 SHGEO/302/C-7T-Statistical Methods in Geography
- 1.10 SHGEO/302/C-7P-Statistical Methods in Geography Lab
- 1.11 SHGEO/401/C-8T-Regional Planning and Development
- 1.12 SHGEO/402/C-9T-Geography of Economic Activities
- 1.13 SHGEO/403/C-10T-Environmental Geography
- 1.14 SHGEO/403/C-10P-Environmental Geography Lab
- 1.15 SHGEO/501/C-11T-Evolution of Geographical Thought
- 1.16 SHGEO/502/C-12T-Remote Sensing
- 1.17 SHGEO/502/C-12P-Remote Sensing Lab
- 1.18 SHGEO/601/C-13T-Disaster Management
- 1.19 SHGEO/602/C-14T-Research Methodology and FieldWork SHGEO/602/C-14P-Research Methodology and FieldWork Lab

2. Discipline Specific Electives Subjects Syllabus:

- 2.1 SHGEO/503/DSE-1-Hydrology and Oceanography
- 2.2 SHGEO/504/DSE-2-Cultural and settlement Geography

- 2.3 SHGEO/504/DSE-2–Urban Geography
- 2.4 SHGEO/603/DSE-3–Soil and Biogeography
- 2.5 SHGEO/604/DSE-4–Population Geography
- 2.6 SHGEO/604/DSE-4–Geography of Health and Wellbeing

3. Skill Enhancement Subjects Syllabus:

- 3.1 SHGEO/305/SEC-1–Computer Basics and Computer Applications
- 3.2 SHGEO/405/SEC-2–Geographical Information System and GPS

4. Generic Elective Subjects Syllabus:

- 4.1 SHGEO/103/GE-1–Physical Basis of Earth
- 4.2 SHGEO/203/GE-2–Human Geography
- 4.3 SHGEO/304/GE-3–Maps and Diagrams
- 4.4 SHGEO/404/GE-4–Economic Geography

SEMESTER-I

FULL MARKS-200

1. Syllabus for Core Subjects:

COURSE TITLE: Geotectonics and Geomorphology (MARKS-50)

COURSE CODE: SHGEO/101/C-1

CREDIT-6

Course Objectives and Course Outcome:

1. Understand the theories and fundamental concepts of Geotectonic and Geomorphology. Understand earth's tectonic and structural evolution. Gain knowledge about earth's interior. Develop an idea about concept of plate tectonics, and resultant landforms.
2. Acquire knowledge about types of folds and faults and earthquakes, volcanoes and associated landforms.
3. Understanding crustal mobility and tectonics; with special emphasis on their role in landform development.
4. Overview and critical appraisal of landform development models.
5. Ability to record temperature, pressure, humidity and rainfall
6. Develop the skills of identification of features and correlation between them.
7. Do field surveys using appropriate techniques. Identification of rocks and minerals.

1.1 SHGEO/101/C-1:Geotectonics and Geomorphology

Unit1:Earth:Origin and Evolution:

1. (Origin of Universe (Big Bang Model), Origin of Earth(Nebular Hypothesis of Laplace and Interstellar Dust Cloud Hypothesis of Schimdt)
ଓଡ଼ିଆ ନୋଟ ଲାଇସେନ୍ସ (ୱାର୍ଗ୍ରେ ପରେପାର୍ମେତ୍ସ.୭), ଓଡ଼ିଆ ଲାଇସେନ୍ସେ (ପାତ୍ରପାତ୍ର)
2. Geological Time Scale and Geological History of the Earth
ବୀଳାକ୍ଷଣିକ ବୀଳାକ୍ଷଣିକ ଅବସ୍ଥା ଓ ଉତ୍ତରାଧିକ ଅବସ୍ଥା ଯାହାର ବୀଳାକ୍ଷଣିକ ବୀଳାକ୍ଷଣିକ
3. Isostasy:Origin of the concept, Theories of Airy and Pratt, Isostatic Adjustments, Gravity

Anomalies

Եթեմը ԶՀԱՅԱ: ԵՐԱՎՈՅՑ ՎՀԸՆԹԱՅԻ, ՏԵՇՈՅ ԱՆ ՄՎԵՐ 02029,
Եթեմը ԶՀԱՅԱ ՎՀԸՆԹԱ ՊԺԹՆԵԹԱԲԱՅ, ԱԹԴՅՎԱՅՆԵԹԱՅԵԼ ՊԱՎՈՅՈՒՅ

4. Internal Structure of the Earth:Seismological Evidences, Physical, chemical and seismic properties of Earth layers.

ՉԳԻՆ.ՎՈՐ ՊԺԱՅՈՆ ՎՀԸՆԹԱ ԳԵԶԱՅՈՒՅ: ՅՈ ԿԱՎՈՅ ՕԺՎԵՅ ՎՀԸՆԹԱ ԵՅ.ՈՒՅ,
ՉԳԻՆ.ՎՈՐ ՊԺԱՅ ՎՀԸՆԹԱ ՊՋԱԿԵՅՏՐ, ԵՐԱԿԵՅՏՐ ԱՆ ՑՈՎԱՅՈՆ ՕԺՎԵՅ
ՎՀԸՆԹԱ ԿՐԱՅՑՅԱ ԵՅ

Unit2:Tectonic Theorie sand Processes:

- 1 Continental Drift Theory of Alfred Wegener
ՅԱՐԱԳՆԱԳ ԳԵՂԵԳՆԵՐՆԻ ԱԿ ԳԹՄԱՅՑ ԽԱՎԱՐ ՊԺՎԵՅՄԱ 02029
- 2 Palaeo-magnetism and Sea Floor Spreading
ԱԹՎԱՅ ՔԵԱՎՈՅԹԵՅՍՈՅ ԱՆ ԶԻՎԼԵՆ ԵԹԵՅՈՒ ՊԺՎԵՅՄԱ
- 3 PlateTectonic Theory; Plate Composition, Plate Movement, Plate Margins,Triple Junctions.
ԱՐՏԻ ԽՏԵՒԹԵՐՆԵՐ 02029; ԱՐՏԻ ՎՀԸՆԹԱ ԳԵԶԱՅՈՒՅ, ԱՐՏԻ ԵԹՆԱՅ, ԱՐՏԻ
ԵՂԱՄՅՈՒՅ, ԱՇԽԵՆ ԱՐԹԸ ԻՇԱՅՈՒ
- 4 Tectonic Processes in relation to Plate Tectonics; Orogenesis, Earthquake, Vulcanicity
ԽՏԵՒԹԵՐՆԵՐ Ա.ՎԻ ՎՀԸՆԹԱ ԵՅ.ՖԵ.Ռ ՕԺՎԵՅ 02 ԱՐՏԻ ԽՏԵՒԹԵՐՆԵՐ;
ԱԹՎԱՅ ՍԱՎԱ ԵՐԱՎՈՅԸ, ՅՈ ԿԱՎՈՅ ՕԺՎԵՅ, ՎՀ.ՎԵՐ ՊԵՎԱՆ

Unit3:Process Geomorphology:

- 1 Evolution of landforms on Uniclinal, Folded and Faulted Strata
ՅՈ ԿԱՎՈՅ ԱԲՐԱՋԻ.Ը ՎՀԸՆԹԱ Ա.ՎԻ-ՀԱՇԵՎԵՅՄԱ, ԱՐԴ ԵՀՑ ԵՇՈՎՀՅԱ, ՊԺԹԱՄԱ ԱՆ
ԽԱՅՈՐ ՎՀԸՆԹԱ ՕԺՅԻՅ
- 2 Landscape Evolution Models: Davis,Penck and Hack
ՅՈ ԱԲՐԱՋԻ.Ը ՎՀԸՆԹԱ Ա.ՎԻ-ՀԱՇԵՎԵՅՄԱ ՎՀԸՆԹԱ ԱԲՐԱՋԻ.Ը, ԱՇՅԵ ԱՆ ՎՀԵ
- 3 Climatic Geomorphology: Basicconcepts, Morphoclimatic Zones of Peltier
ԱԹԵՐ-ՎՐԱՎՐԱՅ ՅՈ ԿԱՎՈՅ ԱԲՐԱՋԻ.Ը ՊԱՎՈՅԻ: ԱԲԵԲՈՎ ՉԳԻՆՎԻԵԼ, ՊՃՐԱԳԻԱՅՆ ԱԿ
ԱԺՎԱՌԵՅԵՐՆԵՐՆԵՐՆԵՐ ԻՇԻՋԱՅ
- 4 Hillslopes: Genesis and Morphology
ՎԱՎԱ ՎՀՅԱՆՄԱ: ԵՐԱՎՈՅՑ ԱՆ ԳԵԶԱՅՈՒՅ 02029

ReferenceBooks

- BloomA.L.,2001:Geomorphology:ASystematicAnalysisofLateCenozoicLandforms,
Prentice-HallofIndia,NewDelhi.
- BridgesE.M.,1990:WorldGeomorphology,CambridgeUniversityPress,Cambridge.
- Christopherson,RobertW.,(2011),Geosystems:AnIntroductiontoPhysical

Geography,8Ed.,Macmillan Publishing Company

- Kale V.S. and Gupta A., 2001: Introduction to Geomorphology, Orient Longman, Hyderabad.
- Knighton A.D., 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London.
- Selby, M.J., (2005), Earth's Changing Surface, Indian Edition, OUP
- Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to Physical Geology, 4th Edition, John Wiley and Sons
- Thornbury W.D., 1969: Principles of Geomorphology, Wiley.
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COURSE TITLE: Cartographic Techniques (MARKS-50)

COURSE CODE: SHGEO /102/C-2T:

CREDIT-4

Course Objectives and Course Outcome:

1. Comprehend the concept of scales and representation of data through cartograms.
2. Interpret geological and weather maps.
3. Learn the usages of survey instruments.
4. Brings direct interaction of different types of surveying instruments like Dumpy level and Theodolite with environment.
5. Develop an idea about different types of thematic mapping techniques.

SHGEO/102/C-2T Cartographic Techniques

1.2 Cartographic Techniques

Unit-1: Scale

1. Scale: Concept and Notations
 లుస్ట: ఉదాహరణ అను వాయిధాగా
2. Construction of Linear, Comparative (Unit), Diagonal and Vernier scales.
 పాలారింష, బాపొథిస్టికల్ (బెంగాలీ), మిలిండేంప అను ఉధానిస్టాషన్ లుస్ట నెసంగె గోవండ
3. Scale Enlargement and Reduction (Computations)

4. ഗ്രാഫിക്കൽ മീറ്റുകൾ നിന്ന് പ്രദർശന ചെയ്യുന്ന വാലിത്ത്.
- Calculation of area from maps(Graphical Methods)
- ചേരുമ്പാബുദ്ധ പരമാമൂല ഒരു പാട്ടി നിരുപ്പം സാരിച്ച അല്ലെങ്കിൽ വാലിത്ത്.

Unit-2:Map Projections

- 1 Map Projections:Nature and Classification
പാട്ടി പ്രവർത്തനങ്ങൾ: ലൈസിഫിക്കഡ് അല്ലെങ്കിൽ വാലിത്ത്.
- 2 Basic Concepts: Parallels and Meridians, Datum,Geoid, ScaleFactor, Deformation, Orthodrome and Loxodrome.
പ്രഥമാംഗം ഉദിതം: പ്രഥമാംഗം അല്ലെങ്കിൽ പാട്ടി, ഫോറിയൻ, സാൾഫോ, ലൈസിഫിക്കഡ്, ടോപോഗ്രാഫിക്കൽ പാട്ടി, ഓറിനേറ്റേഷൻ അല്ലെങ്കിൽ ഫോറിയൻ പാട്ടി
- 3 Principles, Theories, Construction and Properties of select Map Projections: Conical Case-Simple Conical with one and two standard parallels, Polyconic and Sinusoidal
Cylindrical Case- Equal Area, Mercator
Polar Zenithal Case-Gnomonic, Stereographic
സാൾഫോ ദീപ് പാട്ടി പ്രവർത്തനങ്ങൾ പാട്ടി അല്ലെങ്കിൽ വാലിത്ത്, 02029, കേരളാബദ്ധ അല്ലെങ്കിൽ: പാട്ടി ദീപ് - ലൈസിഫിക്കഡ് പാട്ടി അല്ലെങ്കിൽ ലൈസിഫിക്കഡ്, ഓറിനേറ്റേഷൻ അല്ലെങ്കിൽ ഫോറിയൻ പാട്ടി
സാൾഫോ ദീപ് - ലൈസിഫിക്കഡ് പാട്ടി, പാട്ടി പാട്ടി
പാട്ടി സാൾഫോ ദീപ് - ലൈസിഫിക്കഡ് പാട്ടി, പാട്ടി പാട്ടി
- 4 UTM Grid System.
അല്ലെങ്കിൽ പാട്ടി പാട്ടി പാട്ടി

Unit-3:Surveying

- 1 Concepts and Principles:Angles,BearingandAzimuths,Traversing,Radiation,Intersection
ഉദിതം: അല്ലെങ്കിൽ ദീപ് : ദീപ് ദീപ്, റോഡ് പാട്ടി അല്ലെങ്കിൽ, റാഡിയേറേഷൻ, എസ്റ്റിജ്മേറ്റിക്സ്, പ്രിസ്മിക്സ്
- 2 Prismatic Compass: Preparation of landuse maps by open and closed traverse;computations of compasstraverse-Included Angle,Area of traverse
പ്രിസ്മിക്സ് ദീപ് : പ്രിസ്മിക്സ് ദീപ് ദീപ് റാഡിയേറേഷൻ അല്ലെങ്കിൽ അല്ലെങ്കിൽ റോഡ് പാട്ടി; ദീപ് ദീപ് റാഡിയേറേഷൻ വാലിത്ത്.02-ബാഹ്യം, റാഡിയേറേഷൻ വാലിത്ത്
- 3 Levelling by Dumpy Level:Profile and Contouring
പ്രിസ്മിക്സ് ദീപ് ദീപ് : പ്രിസ്മിക്സ് ദീപ് ദീപ് റോഡ് പാട്ടി
- 4 Calculation of Height and Distance byTransit Theodolite
റാഡിയേറേഷൻ ദീപ് ദീപ് ദീപ് ദീപ് അല്ലെങ്കിൽ വാലിത്ത്.

ReferenceBooks

- AnsonR.andOrmelingF.J.,1994:InternationalCartographicAssociation:BasicCartographicVol.P regmenPress.
- GuptaK.K.andTyagi,V.C.,1992:WorkingwithMap,SurveyofIndia,DST,NewDelhi.
- MishraR.P.andRamesh,A.,1989:Fundamentals of Cartography,Concept,NewDelhi.
- MonkhouseF.J.andWilkinsonH.R.,1973:MapsandDiagrams,Methuen,London.

- Rhind D.W. and Taylor D.R.F., (eds.), 1989: Cartography: Past, Present and Future, Elsevier, International Cartographic Association.
 - Robinson A.H., 2009: Elements of Cartography, John Wiley and Sons, New York.
 - Singh R.L. and Singh R.P.B., 1999: Elements of Practical Geography, Kalyani Publishers.
 - Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
-

1.2 SHGEO/102/C-2P:Cartographic Techniques Lab

Cartographic Techniques

- Practical works are to be completed in the classroom.
- Works are to be done in pencil and neatly handwritten and signed by class teachers (None need of Final Sheets).
- Laboratory Note Books will be like those used in other laboratory based science subjects.

List of Practical

A Project File, comprising one exercise each is to be submitted

1. Graphical construction of scales: Plain, comparative, diagonal and vernier
2. Construction of projections: Polar Zenithal Stereographic, Gnomonic, Simple conic with one standard parallel, Bonne's, and Cylindrical Equal Area,
3. Preparation of land use maps by open and closed traverse; computations of compass traverse-Included Angle, Area of traverse
4. Levelling by Dumpy Level: Profile and Contouring
5. Calculation of Height and Distance by Transit Theodolite (Base Accessible and Inaccessible)

SEMESTER-II

FULL MARKS-200

COURSE TITLE: Human Geography (MARKS-50)

COURSE CODE: SHGEO//201/C-3

CREDIT-6

Course Objectives and Course Outcome:

1. Gain knowledge about major themes of human Geography.
2. Acquire knowledge on the history and evolution of humans.
3. Understand the approaches and processes of Human Geography as well as the diverse patterns of habitat and adaptations.
4. Develop an idea about space and society

1.3 SHGEO/201/C3: Human Geography

Unit1:Nature and Principles

1. Nature and scope and recent trends.Elements of Human Geography
አዕለዥዎች በዚህ ስርዓቱ ለማሳሳይዎች እና ሂደሪያ (ፖ.ማን.ገዢ) እና ደጋብዥና ጽዜነ
ማስተካከለ ለማድረግ በዚህ ስርዓቱ ለማሳሳይዎች
2. Approaches to the study of Human Geography;Resource,Locational, Landscape,Environmental
አዕለዥዎች በዚህ ስርዓቱ ለማሳሳይዎች ለማሳሳይዎች የሚከተሉት ለማሳሳይዎች ከፍላይ በዚህ ስርዓቱ
ማስተካከለ ለማሳሳይዎች ለማሳሳይዎች ለማሳሳይዎች ለማሳሳይዎች
3. Evolution of humans. Concept of race and ethnicity
አዕለዥዎች አ.ኋና ባሬከራዊ ለማሳሳይዎች የኢ.፩.፪ ለማሳሳይዎች ታክክልዎች, እና የኢ.፩.፪ ለማሳሳይዎች
4. Space, society and cultural regions(language and religion)
አዕለዥዎች, ለማሳሳይዎች እና የአማርኛ ከዘገበዎች (የኢ.፩.፪ እና ታክክልዎች)

Unit2:Society and Demography

1. Evolution of human societies:Hunting and food gathering,pastoral nomadism,subsistence farming,industrial and urban societies
አዕለዥዎች ለማሳሳይዎች አ.ኋና ባሬከራዊ: ለፖ.ቁጥር እና ለማሳሳይዎች ለማሳሳይዎች,
ኤሌክትሮኒክስ የፖ.ቁጥር እና ለማሳሳይዎች ለማሳሳይዎች

ପ୍ରକାଶ, ଲୋକାନ୍ତିକ ଅଧ୍ୟାତ୍ମିକ ପ୍ରକାଶନ କେନ୍ଦ୍ର

2. Population growth and distribution, population composition;demographic transition model

ଯଥା ଉତ୍ତରଭାଗ ଠାକୁର ପ୍ରକାଶନ, ଯଥା ଉତ୍ତରଭାଗ ପ୍ରକାଶନ କେନ୍ଦ୍ର; ମୂଲ୍ୟାଙ୍କନ କରିବାକୁ ପାଇଁ ପରିଚାରକ ପାଇଁ

3. Population–Resource regions(Ackerman)
ଯଥା ଉତ୍ତରଭାଗ— ଉତ୍ତରଭାଗ କରିବାକୁ ପରିଚାରକ
4. Trend of population growth (India)
ଯଥା ଉତ୍ତରଭାଗ ଠାକୁର ପ୍ରକାଶନ

Unit2: Ekistics and Adaptation

1. Human adaptation to environment:Eskimo and Santhals.

କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ

2.Human population and environment with special reference to development– environment conflict

ପଞ୍ଜାବର ଯଥା ଉତ୍ତରଭାଗ ଠାକୁର ପ୍ରକାଶନ ପରିଚାରକ କାନ୍ତାରିକ ଜୀବିତ— କାନ୍ତାରିକ ଜୀବିତ
କାନ୍ତାରିକ ଜୀବିତ

3..Social morphology and rural house types in India

କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ
କାନ୍ତାରିକ ଜୀବିତ

4.Types and patterns of rural settlements

କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ କାନ୍ତାରିକ ଜୀବିତ

Reference Books

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- Chisholm.(1975):HumanGeography,PenguinBooks,Hermondsworth.
- Daniel,P.A.andHopkinson,M.F.(1989)TheGeographyofSettlement,Oliver&Boyd,London.
- JohnstonR;GregoryD,PrattG.etal.(2008)TheDictionaryofHumanGeography,BlackwellPublication.
- Jordan-
Bychkovetal.(2006)TheHumanMosaic:AThematicIntroductiontoCulturalGeography.W.H.FreemanandCompany,NewYork.

PearceD.(1995):TourismToday:AGeographicalAnalysis,2ndedition,Longman

Scientific&Technical,London

PickeringK.andOwenA.A.(1997):AnIntroductiontoGlobalEnvironmentalIssues,2ndeditionRutledge,London.

Raw,M.(1986):UnderstandingHumanGeography:APracticalApproach,BellandHyman.London

Rubenstein,J.M.(2002),TheCulturalLandscape,7thedition,PrenticeHall,EnglewoodCliffs

SmithDM(1982):HumanGeography:AWelfareApproach,EdwardArnold,London

► Norton.W.(2001):HumanGeography,4thEditionOxfordUniversitypress,Oxford

COURSE TITLE: Mapping Cartogram sand Thematic Mapping (MARKS-50)

COURSE CODE:SHGEO /202/C-4T

CREDIT-4

Course Objectives and Course Outcome:

- Understand and prepare different kinds of maps.
- Recognize basic themes of map making.
- Development of observation skills.

1.4 SHGEO /202/C-4T: Cartograms and Thematic Mapping

Concepts in Theory

Unit-1:Cartographic Representation of Geographical Data

1. ටොරොඩ්සාලෝ. තොමස්සෙ: සුවත්තාගැනීම්, පූජාගැනීම් නිස් උග්‍රභාගිතාව විසඳුවලියාන්

- Geographical Data:Nature, Characteristics and Management
2. තුනක්කේතුව: සෑම යොන්ස, මහා යොන්ස, ගොං.න යොන්ස
Cartograms:Line Graph, Bargraph and Pie
 3. පෘථිවී උත්ත්ව: නැගෙලු නළුව, සැලෙනුවයි, පෙරුටොන්ඩපාල් යොන්ස,
Climatic Diagrams:Wind Rose, Ergograph,Ombrothermic Diagram
 4. සු-ලැබු පැවත්පාල, චැපුවුසුලු නැලැග.
- Age-Sex Pyramid, Dependency Ratio

Unit-2: Mapping Techniques

1. පොකුරුවල් පැය තු ගැනීනෙනුප: පොකුරුවල් චුවැගැන රැඳුව
භාවෝරුවෙන්, මැලුවාගුවාලුවෙන් රැඳුව ගැන තු උදින්නේව
Population Maps and Diagrams: Population Density by Choropleth, Distribution by Dot and Sphere
2. පැවත්තා තු ගැන්නාවනාගාගා: පොකුරුවල් පැවත්තා, ගොල් තුවෙන් ගැන්නාවෙන් තුවනුය
Measures of Inequality:Location Quotient, Gini's Coefficient and Lorenz Curve
3. පැවත්තා තු ගැන්නාවනාවල්: උග්‍රාන්තික තුවෙන් ගැන්නාවනාව
Measures of Interaction:Nearest Neighbour Analysis,
4. තුවෙන්නාවනාවල් ගැන්නාවනාවනාව: ඉග්‍රාන්තික තුවනුය තුවනුය තුවෙන්නාවනාව
Combinational Analysis:Weaver's Crop Combination

Unit-2: Interpretation of Topographical Maps

1. පෙන්වාපූරා තු තුවෙන්නාවනාවනාව තුව තුවෙන්නාවනාවනාව පැය (ආ.ජ.ජප) තුව උත්ත්වයි
තුව පැවත්තාවි
2. තුවෙන්නාවනාවනාව පැවත්තාවනාව තුව තුවෙන්නාවනාවනාව මැවත්තාවි,
Topographic Profile and Broad Physiographic Divisions
3. තුවෙන්නාවනාවනාව පැවත්තාවනාවනාව: තුවෙන්නාවනාව තුවෙන්නාවනාව පැවත්තාවනාවනාව
(අභ්‍යන්තරාන්ත්‍රික තුව පැවත්තාවනාව), තුවෙන්නාවනාව පැවත්තාවනාව, තුවෙන්නාවනාව පැවත්තාවනාව
නැශ්‍රාත, තුවෙන්නාවනාව පැවත්තාවනාව පැවත්තාවනාව පැවත්තාවනාව පැවත්තාවනාව
Drainage Basin Morphometry:Relative Relief, Average Slope(Wentworth's Method), Stream Order, Number, Bifurcation Ratio, Stream Frequency and Drainage Density
4. පැවත්තාවනාවනාවනාව තුව පැවත්තාවනාවනාව පැවත්තාවනාව පැවත්තාවනාව පැවත්තාවනාව පැවත්තාවනාව
තැන්තුවනාව පැවත්තාවනාව
Interpretation of Physical and Cultural features with the help of Transect Chart

Reference Books

- CuffJ.D.andMattsonM.T.,1982:ThematicMaps:TheirDesignandProduction,MethuenYoungBooks
- DentB.D.,TorgusonJ.S.,andHolderT.W.,2008:Cartography:ThematicMapDesign(6thEdition),Mc
graw-HillHigherEducation
- GuptaK.K.andTyagiV.C.,1992:WorkingwithMaps,SurveyofIndia,DST,NewDelhi.
- KraakM.-J.andOrmelincF.,2003:Cartography:VisualizationofGeo-SpatialData,Prentice-Hall.
- MishraR.P.andRameshA.,1989:Fundamentals of Cartography,Concept,NewDelhi.

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- Tyner J.A., 2010: Principles of Map Design, The Guilford Press.
- Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi

1.4 SHGEO/202/C-4P:Cartograms and Thematic Mapping Lab

Cartograms and Thematic Mapping

- Practical works are to be completed in the classroom.
- Works are to be done in pencil and neatly hand written and signed by class teachers (No need of Final Sheets).
- Laboratory Note Books will be like those used in other laboratory based science subjects.
- Topographical map interpretation has to be done on the basis of Survey of India OSM sheets on 1:50,000 scale

List of practical:

A Project File, comprising one exercise each is to be submitted

1. Cartograms: Line Graph, Bar graph and Pie
2. Climatic Diagrams: Wind Rose, Ergograph, Ombotheric Diagram, Age Sex Pyramid, Dependency Ratio
3. Thematic maps: Choropleth, isoline map, chorochromatic map
4. Population Maps and Diagrams: Population Density by Choropleth, Distribution by Dot and Sphere, Dependency Ratio
5. Topographic Profile and Broad Physiographic Divisions
6. Drainage Basin Morphometry: Relative Slope, Average Slope (Wentworth's Method), Stream Order, Number, Bifurcation Ratio, Stream Frequency and Drainage Density
7. Interpretation of Transport and Settlement patterns; Road Density; Settlement Density
8. Interpretation of correlation between Physical and Cultural features with the help of Transect Chart

SEMESTER-III

FULL MARKS-250

COURSE TITLE: Climatology (MARKS-50)

COURSE CODE:SHGEO /301/C-5

CREDIT-6

Course Objectives and Course Outcome:

- 1.Understand the elements of weather and climate, different atmospheric phenomena and climate change.
- 2.Learn to associate climate with other environmental and human issues. Approaches to climate classification.
- 3.To analyze the dynamics of the Earth's atmosphere and global climate. Assessing the role of man in global climate change.
- 4.Prepare various climatic maps and charts and interpret them.
- 5.Learn to use of various meteorological instruments.
- 6.Learn the interaction between the atmosphere and the earth's surface. Understand the importance of the atmospheric pressure and winds.
- 7.Understand how atmospheric moisture works.

1.5 SHGEO /301/C-5: Climatology

Unit-1:Structure and Composition of Atmosphere

1. **గැලුණුවෙන්: පුද්ගලික අව පැනිලතා, ශේෂුම් වායි මධ්‍යස්ථා**
Insolation: Factors and Distribution, Global Heat Budget
2. **ගැඹුණුවෙන් තව තැපෑලනයෙන්: පිළිබඳ අව ප්‍රස්ථාන තව උග්‍රණයක් ගෙවීමෙන්,**
Inversion of Temperature: Processes and Impact on Surface Weather
3. **සුපැලුණාග්‍රැන් තුළුවයාගැනීම අව ගැලුණුවයාගැනීම**
Atmospheric Stability and Instability
4. **පුද්ගල අව පැනිලතා තව රෝගුවෙනුවෙන්; ප්‍රස්ථානයා තව**
පැනිලතාගැනුවෙනුවෙන්: මුළු තුළුවයා අව රෝගුවෙන්-සුජුවෙනුවෙන් ගෙවීමෙන්
Forms and processes of Condensation; Mechanism of Precipitation: Ice Crystal and Collision-Coalescence Theory

Unit-2:Atmospheric Circulation

- 1 പരിസ്ഥിതി ബഹുമാനപ്പെട്ട, സ്ഥാപിക്കപ്പെട്ട അവലോകന അനുഭവങ്ങൾ, പരിപാലനപരമായ Factors controlling Air Motion and resulting Flow Patterns
- 2 പ്രകാശത്തിൽ നിന്നുള്ള ലഭ്യതയും വ്യാപ്തിയും വ്യാപാരങ്ങൾ ഒരു ഗണപരിസ്ഥിതിയാണ് പറമ്പാ; മേഖലകളുടെ വ്യാപാരങ്ങൾ അവ കൂടാൻ. Planetary wind system with special reference to Tricellular Model; Walker Circulation and ENSO
- 3 നീരു ലക്ഷ്യപ അവ ഫീൽഡ് അവസ്ഥ: പാശ്ചാത്യ, പാഷ്പാത്യ ദുർഘട്ട എന്നവയുടെ പരിസ്ഥിതിയും പ്രകാശത്തിലെ പാശ്ചാത്യ, Jet Stream and Rossby Waves: Origin, Characteristics and Impact on Surface Weather
- 4 നൃസ്വലാ ദിവ പദ്ധതിയും നാഗരിക്യത്തിനു വാച്ചുമാറ്റം ഒരു പാശ്ചാത്യ സംഗ്രഹം. Genesis of Monsoon with particular reference to South Asia

Unit-3:Extreme Events and Climatic Classification

- 1 പരിസ്ഥിതി അവ അവസ്ഥ അവ പാശ്ചാത്യ; പരിപാലനപരമായ അവ പരിപാലനപരമായ അവസ്ഥ; Frontogenesis and Frontolysis
- 2 അവസ്ഥ ദുർഘട്ട ബഹുമാനപ്പെട്ട അവ തന്ത്രജ്ഞാന ദുർഘട്ട പരിസ്ഥിതിയും പ്രകാശത്തിലെ അവസ്ഥയും
- 3 അവസ്ഥ ബഹുമാനപ്പെട്ട വ്യാപാരം അവ പാശ്ചാത്യ ദുർഘട്ട അവ പാശ്ചാത്യ അവസ്ഥയും
- 4 ബഹുമാനപ്പെട്ട വ്യാപാരം അവ അവസ്ഥയും Climate Change: Causes and Evidences

Reference Books

- Barry R.G. and Carleton A.M., 2001: Synoptic and Dynamic Climatology, Routledge, UK.
- Barry R.G. and Corley R.J., 1998: Atmosphere, Weather and Climate, Routledge, New York.
- Critchfield H.J., 1987: General Climatology, Prentice-Hall of India, New Delhi

- Lutgens F.K., Tarbuck E.J. and Tasa D., 2009: The Atmosphere: An Introduction to Meteorology, Prentice Hall, Englewood Cliffs, New Jersey.
- Oliver J.E. and Hidore J.J., 2002: Climatology: An Atmospheric Science, Pearson Education, New Delhi.

COURSE TITLE: Geography of India (MARKS-50)

COURSE CODE: SHGEO/303/C-6

CREDIT-6

Course Objectives and Course Outcome:

- Analyzing the concept of regions and regionalization.
- Understanding the detailed geography of India
- Studying typical physiographic, planning, arid and biotic regions of India
- Describing and analyzing the problems and consequences of unreliable rainfall, soil salinity, urban slums and SEZ delineation

1.6 SHGEO/303/C-6: Geography of India

Unit1:Geography of India

1. ౫ිස්ට්‍රොඩ් අනු උග්‍රස්ථාවෙනුවෙන් සැපයීමෙන්, ප්‍රධාන ප්‍රශ්න මෘදුකැලුව
Tectonic and stratigraphic provinces, physiographic divisions
2. ඉන්ජේනෝලඣි, වන්ත්‍ර අනු ඉන්ජේනෝලඣියා: යන්.එගෝ අනු වන්.ගැඩ
Climate, soil and vegetation: Characteristics and classification
3. ප්‍රස්ථානය අනු ඉන්ජේනෝලඣි ප්‍රතිචාර අනු එමුජ්‍යා, ප්‍රේල්ව්‍යා, ත්‍රිඛ්‍යා,
ප්‍රාග්‍රැන්ඩ් අනු ගැල
Mineral and power resources distribution and utilisation of iron ore, coal, petroleum,gas;
4. එකඟත්ව ඉගැන්ඩ නිර්මාණ ත්‍රිත්‍ය: එකඟත්ව ඉගැන්ඩ ප්‍රධාන ප්‍රශ්න මෘදුකැලුව
බන්ඩෝ වන්.ගැඩ (ඒන්. ගැඩ. එංඩ)

Regionalisation of India:Physiographic Division of india after (R.L.Singh),

Unit2: Cultural and Economic setting

- 1.2.1 වත්‍ර උග්‍රස්ථාව: ප්‍රාග්‍රැන්ඩ්, රූජ්‍යා, ප්‍රේල්ව්‍යා අනු ප්‍රතිචාර
Population: Distribution, growth, structure and policy

- 1.2.2 නැග්ලේන්ස්, බම්බ්ල්, ඉඩඩන්ස්ප්, යන්.එල්ං මැස්ල් බන්ඩෝ ව්‍යුහාත්මක ප්‍රතිචාර,
ආන්ඩ්‍රුන්.ඡො තු අනු තැබ්ද තුවුනු උං.ඩො.ඩ

Distribution of population by race, caste, religion, language, tribes and their correlates

- 1.2.3 ප්‍රාග්‍රැන්ඩ්: වන්.ඒල්ං.ඩ එගුරාත්‍ය අනු එදන පැවත්තු ප්‍රතිචාර
Agricultural regions.Green revolution and its consequences

- 1.2.4 ව්‍යුහාත්මක තැබ්ද්‍ය: එගුරාත්‍ය අනු චැංකිජ ප්‍රාග්‍රැන්ඩ් එගුරාත්‍ය.

Industrial development:Automobile and information echnology

Unit2:Geography of WestBengal

- ପ୍ରକାଶିତ ପଥାରଦେଖାଗମଳ: ପ୍ରକାଶିତ ଅନ୍ତର୍ଭାବ, ଉଚ୍ଚ ଓ ନିମ୍ନ ପଥାର ଏଥିବାରୀ
Physical perspectives:Physiographic divisions,f orest and water resources
- ଜନ ଲୋକଙ୍କାରୀ: ବୃଦ୍ଧି, ପାଠ୍ୟକାର ଓ ପାଠ୍ୟପାଦ ହୋଇଥାଏ
Population:Growth,distribution and human development
- ବିଭାଗଙ୍କାରୀ: ମିନିଂ, କାଗଜ ଓ ସାଧାରଣ କାର୍ଯ୍ୟ (ଲାଗ୍ରାମିକ)
Resources: Mining, agriculture and industries
- ରାଜୀନାମାରୀରେ. ସବୁରୀରେ: ଦର୍ଜେଶ୍‌ଵାରୀ ମାତ୍ର, ନିର୍ମାଣପାଦାବଳୀ ଓ କାନ୍ଦିଶ୍ଵରାଳୀ
Regional Problem:Darjeeling Hills,Jangalmahal and Sundarban

Reference Books

- DeshpandeC.D.,1992:India:ARegionalInterpretation,ICSSR, NewDelhi.
- Johnson,B.L.C.,ed.2001.GeographicalDictionaryofIndia.VisionBooks,NewDelhi.
- MandalR.B.(ed.),1990:PatternsofRegionalGeography—An InternationalPerspective.Vol.3—IndianPerspective.
- SdyasukGalinaandPSengupta(1967):EconomicRegionalisationofIndia,CensusofIndia

- CensusofIndia
- Sharma,T.C.2003:India-EconomicandCommercialGeography.VikasPubl.,NewDelhi.
- SinghR.L.,1971:India:ARegionalGeography,NationalGeographicalSocietyof India.

- Singh,Jagdish2003:India-AComprehensive&SystematicGeography,GyanodayaPrakashan,Gorakhpur.
- SpateO.H.K.andLearmonthA.T.A.,1967:IndiaandPakistan:AGeneralandRegionalGeography,Met huen.
- Tirtha,Ranjit2002:GeographyofIndia,RawatPubls.,Jaipur&NewDelhi.

- Pathak,C.R.2003:SpatialStructureandProcessesofDevelopmentinIndia.Regional ScienceAssoc.,Kolkata.
- Tiwari,R.C.(2007)GeographyofIndia.PrayagPustakBhawan,Allahabad
- Sharma,T.C.(2013)EconomicGeographyofIndia.RawatPublication,Jaipur

COURSRE TITLE:Statistical Methods in Geography (MARKS-50)

COURSE CODE:SHGEO /302/C-7T

CREDIT-4

Course Objectives and Course Outcome:

1.e Learn the significance of statistics in geography.

Understand the importance of use of data in geography

2.Recognize the importance and application of Statistics in Geography

3.Interpret statistical data for a holistic understanding of geographical phenomena. Know about different types of sampling.

4.Develop an idea about theoretical distribution.

5.Learn to use tabulation of data. Gain knowledge about association and correlation.

1.7 SHGEO /302/C-7T: Statistical Methods in Geography

Unit-1:Data collection and Representation

1

მიზანი იშვიათი ეტურები: სამართლის კანონით მოძღვაული – გეგმა მას ამონია, ამონი, ჩატარებული, დახსენი მას მიზანი იშვიათი ეტურები
Geographical Data Management: Collection (SamplingTechniques-Significance and Types),Classification,Tabulation, Interpretation and Analysis of Geographical Data

2

დოკუმენტები დაწერა: გრაფიკები მას ყოველიციანობის, ფასენატი მას ხმარებენ მოძღვაული, დამატება დაწერა დოკუმენტ დაწერა დამატება დაწერა დოკუმენტის ასაკუსტიკებელი (ასერტიფიკატი, დოკუმენტი, ხომალ მას ცალიერიდ

Frequency Distribution: Attribute and Variable, Discrete and Continuous, Graphical Representation of Frequency Distribution(Histogram, Polygon,Curve and Ogives)

3

ცენტრალური მიზანი ჩემის: მენ, არმაროვ მას აცი; ცხრალები
Measures of Central Tendency:Mean,Median and Mode; Skewness

4

დაწერა დაწერა დაწერა დაწერა: დაწერა, ხშობაზერთ დაწერა, სიმიმდებარება
დასახლებელი მას არა არა დასახლებელი დასახლებელი
Measures of Dispersion: Range, Quartile Deviation, Mean Deviation and Standard Deviation

Unit-2:Data Analysis and Interpretation

- 1 උස්ථාන මතලනයෙනුප, උපයාර තැබ්පත්වලින අන ප්‍රජාගත් පිශීලිවලින
Scatter Diagram, Simple Correlation and linear Regression
- 2 නමුදුප උසාන සේන්ටොලේඥ: ස්ථිරත්ව, උසාන සුදුන්වනු, ප්‍රජාගත්
සුදුන්වනු
Tim eSeries Analysis:Actual Trend, Semi Average, Moving Average
- 3 එක්සත් තැබ්පත් තුෂේම්ත්‍ර සඳහා අන එක්සේම්ත්‍ර උසාන (සංඛ්‍යාත්‍යාග්‍රහණවලින අන
ගෙනුවුත්වන තැබ්පත්වලින)
- 4 සැම්ස්ජ්‍යාල්‍ය තැබ්පත්වල පැවත්වන
Standard Error of Estimate and Standard Scores (Computations and Graphical
Representation)
- 5 සැම්ස්ජ්‍යාල්‍ය තැබ්පත්වල පැවත්වන
Absolute Residua lMapping

Unit-3:Computer Application in Statistics

- 1 මිනින සේනාන: සෘජ්‍යාත්‍යාග්‍රහණ සැස්කුම්පලින අන ව්‍යුත්සුව්‍යාග තුළුන 02
Data Entry:Arrangement in to ascending and descending order
- 2 පුණුගත්තාව්‍යාල්‍ය පැනුවනු යුතුවන්: ව්‍යුත්සුව්‍යාග, පුණුගත්තාව්‍යාල්‍ය, ප්‍රත්‍යුම්‍ය,
ස්ථානය, ප්‍රාග්‍රැහණය,
- 3 පැනු, පැනුව්‍යාල්‍ය, පැනු තැබ්පත් ව්‍යුත්සුව්‍යාග, එක්සේම්ත්‍ර සැස්කුම්පලින පැනුවනු
ව්‍යුත්සුව්‍යාග
- 4 මූල්‍යාලිත්වා තැබ්පත්වල: උස්ථාන මතලනයෙනුප අන පුණුගත් ප්‍රත්‍යුම්‍ය පැනුව්‍යාල්‍ය,
ප්‍රජාගත් සුදුන්වනු
Bivariate Techniques: Scatter Diagram and Fitting of Trendlines, MovingAverage

Reference Books:

- BerryB.J.L.andMarbleD.F.(eds.):SpatialAnalysis–AReaderinGeography.
- EbdonD.,1977:StatisticsinGeography:APracticalApproach.
- HammondP.andMcCullaghP.S.,1978:QuantitativeTechniquesinGeogra
phy:AnIntroduction,
- OxfordUniversityPress.
- KingL.S.,1969:StatisticalAnalysisinGeography,Prentice-Hall.

- MahmoodA.,1977:StatisticalMethodsinGeographicalStudies,Concept.
- PalS.K.,1998:StatisticsforGeoscientists,TataMcGrawHill,NewDelhi.
- Sarkar,A.(2013)Quantitativegeography:techniquesandpresentations.Orient
BlackSwanPrivateLtd.,NewDelhi
- SilkJ.,1979:Statistical Conceptsin Geography,AllenandUnwin,London.

- ▶ SpiegelM.R.:Statistics,Schaum'sOutlineSeries.
- ▶ YeatsM.,1974:AnIntroductiontoQuantitativeAnalysisinHumanGeography,McGrawHill,NewYork

1.7SHGEO/302/C-7P:Statistical Methods in Geography Lab

- Practical works are to be completed in the classroom.
- Works are to be done in pencil and neatly hand written and signed by class teachers(No need of FinalSheets).
- Laboratory Note Books will be like those used in other laboratory based sciencesubjects.

2 List of Practical:

A Project File,comprising one exercise each is to be submitted

- 2.6.1 Construction of data matrix with each row representing a real unit (districts/blocks/mouzas/towns) and corresponding columns of relevant attributes.
 - 2.6.2 Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted.
 - 2.6.3 Histograms and frequency curve would be prepared on the dataset.
 - 2.6.4 From the data matrix a sample set (20%) would be drawn using random, systematic and stratified methods of sampling and locate the samples on a map with a short note on methods used.
5. Based on the sample set and using two relevant attributes, a scatter diagram and regression line would be plotted and residual from regression would be mapped with a short interpretation.

SEMESTER-IV

FULL MARKS-250

COURSE TITLE:Regional Planning and Development (MARKS-50)

COURSE CODE:SHGEO/401/C-8

CREDIT-6

Course Objectives and Course Outcome:

- 1.Understand and identify regions as an integral part of geographical study.
- 2.Appreciate the varied aspects of development and regional disparity, in order to formulate measures of balanced development.
- 3.Analyzing the concept of regions and regionalization.
- 4.Studying typical physiographic, planning, arid and biotic regions of India. Understanding the detailed geography of India.
- 5.Gain knowledge about definition of region, evolution and types of regional planning. Develop an idea about choice of a region for planning.
- 6.Build an idea about theories and models for regional planning. Know about measuring development indicators.
- 7.They can know about delineation of formal regions by weighted index method and also delineation of functional regions by breaking point analysis.
- 8.Gain knowledge about measuring inequality by Location Quotient, and also measuring regional disparity by Sopher Index

1.8 SHGEO/401/C-8: Regional Planning and Development

Unit1:Regional Planning

1. ଭାରିଣୀ ନିର୍ମାଣ କଣିକାଗତିରେ: ଭାରିଣୀ ନିର୍ମାଣ ଯେତାରେ କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା
ପଥିବାରେ
Concept of regions:Types of regions and Methods of delineation.
ଭାରିଣୀରେ କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା
କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା କିମ୍ବା

Types of planning, principles and objectives of regional planning, multi-level planning in India

2. റാഖിക്കാംഗോദ്ധീശ്വരൻ പ്രവർത്തനപ്രമുഖനായ നാട്ടം കൗൺസിൽ, റാഡിക്സം കൗൺസിൽ എൻ റാഖിക്കാംഗോദ്ധീശ്വരൻ നാട്ടം പ്രവർത്തനപ്രമുഖ, റാഡിക്സം കൗൺസിൽ നാട്ടം പ്രവർത്തനപ്രമുഖ പാർപ്പിക്കപ്പെട്ടു

Steps of regional planning, need for regional planning in India, multi-level planning in India

3. Planning regions in India

റാഡിക്സം കൗൺസിൽ നാട്ടം പ്രവർത്തനപ്രമുഖ റാഖിക്കാംഗോദ്ധീശ്വരൻ

4. Metropolitan concept: metropolitan areas, and urban agglomerations

Unit2:Regional Development

1. നോൺ.എം പ്രൈസ്റ്റോ, റാഡി.സി റോച്ചുപ് നോൺ.എം

Development: Meaning, growth versus development

2. പ്രവർത്തി മുന്തിരം കേന്ദ്ര പരമുഖ റാഡിക്സം കൗൺസിൽ നാട്ടം നോൺ.എം പ്രൈസ്റ്റോ

Concept of Growth pole model of Perroux; Growth centre model in Indian context

3. റാഖിക്കാംഗോദ്ധീശ്വരൻ. നോൺ.എം ഓഫീസേറ്റ് നാട്ടം പരമുഖ: ബാരുദ്ദുബാൾക്കാരി ബഹുസംഖ്യ (പാസ്റ്റോർ), ബാരു പ്രവർത്തനപ്രമുഖ (ധനകലാപം നാട്ടം പ്രവർത്തനപ്രമുഖ) നാട്ടം ബന്ധപ്പെട്ട റാഡിക്സം കൗൺസിൽ (പാലക്കാട്)

Theories and models for regional development: Cumulative causation (Myrdal), core periphery (Hirschman and Friedman) and Economic Growth Stage Model(Rostow)

4. നോൺ.എം നാട്ടം കേന്ദ്രപ്രവർത്തനപ്രമുഖ ബാഥ: ബന്ധപ്പെട്ട നോൺ.എം, പാരിസ്ഥിതിക നോൺ.എം

Indicators of development: Economic, social and environmental. Human development.

Unit3:Regional Planning & Development in India

1. റാഡിക്സം കൗൺസിൽ നാട്ടം റാഡിക്സം കൗൺസിൽ നാട്ടം റാഖിക്കാംഗോദ്ധീശ്വരൻ. നോൺ.എം നാട്ടം കൗൺസിൽ നാട്ടം കൗൺസിൽ നാട്ടം

Concept and strategies of regional development in India

2. Nature of regional inequalities and disparities in India

റാഡിക്സം കൗൺസിൽ നാട്ടം റാഖിക്കാംഗോദ്ധീശ്വരൻ. പാരിസ്ഥിതിക നാട്ടം റാഡിക്സം കൗൺസിൽ നാട്ടം റാഡിക്സം കൗൺസിൽ

3. റാഡിക്സം കൗൺസിൽ നാട്ടം കൗൺസിൽ റാഡിക്സം കൗൺസിൽ നാട്ടം കൗൺസിൽ റാഖിക്കാംഗോദ്ധീശ്വരൻ.

Historical perspective of regional imbalance in India

4. റാജ്യപദ്ധതി കാലഘട്ട ആ നിർന്മാണത്തിൽ. പ്രവാസിക്കുന്നതിൽ വരുമാന പ്രവർത്തനങ്ങൾ

Need for regional planning of India

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- PeetR.,1999:TheoriesofDevelopment, TheGuilfordPress,NewYork.
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COURSE TITLE: Geography of Economic Activities (MARKS-50)

COURSE CODE:SHGEO/402/C-9

CREDIT-6

Course Objectives and Course Outcome:

Students will be aware about the different global economic policies, scenario etc. They will also learn about the industrial policies of India and different economic zones of India.

Students will learn about the role of transport in entire economic and social processes. This course aims to make students understand the locational advantage of different economic and social institutes based on transport principle. They are made aware of the role of public transport in addressing the problems of congestion and air pollution. This understanding may help them in formulating plan for regional development and economic regeneration by proper transport planning .

- 1.Understand the concept of economic activity, factors affecting location of economic activity. Gain knowledge about different types of Economic activities
- 2.Assess the significance of Economic Geography, the concept of economic man and theories of choice.
- 3.Analyze the factors of location of agriculture and industries.
- 4.Understand the evolution of varied types of economic activities.
- 5.Map and interpret data on production, economic indices, transport network and flows

1.9 SHGEO/402/C-9:Geography of EconomicActivities

Unit-1:Economic Activity: Agriculture

- 1 යථා අ.වා: ඉතුළ යථා අ පැලං යථා
Agricultural System: Plantation Agriculture & Mixed Farming.
- 2 සෙනු තොපුගස්සුව අ සෙනු මූල්‍ය නිමුවකාලීන තොපුගස්සුව
- 3 Crop Combination and Crop Diversification.
- 4 ඉඩන්ටෝ පාඨමාන යථා අ.වා තැබෙන වෘත්තීය වෘත්තීය වෘත්තීය
Classification of World Agricultural Systems after Whittlesey.
- 5 යථා තොපු පොදුව: රුධිර තොපුව පොදුව
Model in Agricultural Geography: Von Thunen Model

Unit-2:Economic Activity: Industry

- 1 තැබෙන උගැනීම්: ව්‍යුහ.න තැබෙන උගැනීම් තැබෙන උගැනීම්
Location Factors; Role of transport in industrial location
- 2 ව්‍යුහ.න තැබෙන තැබෙන පොදුව: ව්‍යුහ.න තැබෙන පොදුව
Models of Industrial Location: Weber & Losch.

- 3 ව්‍යුහයේ තීමැරිජ්‍ය: ප්‍රංගම්පාල-ප්‍රාදේශ, එකත්තලේඛන-ඉන්ඩොප්‍රිඩ්, වෘත්තුවලෙන්
 Industrial Regions:Mumbai-Pune;Asansol-Durgapur, Haldia
- 4 ව්‍යුහ තීමැරිජ්‍ය උප්‍යුත්ත්වා නේ පෙන්වුණුයි
 Impact of Industrial Activities on Environment

Unit-3:Economic Activity: Trade, Transport and Tourism

- 1 එකත්තවාන්ත්‍රිය සැපයා ඇ.වා නේ යෝදාය. නැ. ඉ. බැංචාල සේවා
 Role of WTO in International Trade
- 2 ප්‍රතිචාරවත්ත තීමැරිජ්‍ය: ස්ථාවරාකාශ ඇත් තෙරුත්ත්තාවයෙන්ගැනීමෙන්
 Transport Network:Accessibility and Connectivity
- 3 ජන්‍යාල ව්‍යුහයේ අන් දැක්වා. නිලධාරී තුළුන්මල්
 Tourism Industry and its Components
- 4 ජන්‍යාල රැකූත්ත්වා ප්‍රෙමිය: තුළු. මෝදාය. චාන්ත්‍රාන් එම නැ.ජ්.ජ්.ඉ. ප්‍රෙමිය
 Tourism Evolution Model:TALC Model of R.W.Butler

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COURSE TITLE: Environmental Geography (MARKS-50)

COURSE CODE: SHGEO/403/C-10T

CREDIT-6

Course Objectives and Course Outcome:

The living things interact with each other in various ways and with the non-living components that make up the environment in which we live. These non-living components include rocks, soils and water, as well as the atmosphere. All these interactions produce a complicated set of interrelationships and these interrelationships can take many forms. Thus, this paper on basics of environment and ecology prepares students for careers as leaders in understanding and addressing complex environmental issues from a problem-oriented, interdisciplinary perspective. Ecology is a scientific way of thinking about the world. This means that it involves a certain way of investigating, studying and writing about the systems. Student can learn the core concepts and methods from ecological and environmental perspectives and their application in environmental problem solving.

Students will learn about the necessity and mechanism of waste water treatment and understand the procedures to manage land, air and noise pollution. This course aims to enable the learners to participate in making of pollution free environment. This fundamental understanding and knowledge help them to get engaged in various non-government and government initiatives in this regard.

1.10 SHGEO/403/C-10T: Environmental Geography

Unit-1: Environmental Issues in Geography

Geographers' approach to environmental studies

2. උනුපත්වල තැබෙන නීතිමයාදා වෙළඳා ප්‍රාග්ධන තැබෙන නීති මෙහෙයු. මෙහෙයු මෙහෙයු

Perception of environment in different stages of civilization

3. උනුපත්වල එහි උනුපත්වල ඉඩන්තියා එහි ආලුප්‍රාග්ධන නීති තැබෙන නීති ඉඩන්තියා මෙහෙයු

Concept of holistic environment and system approach

4. උත්ත්‍යාම උනුපත්වල ඉඩන්තියා

Modern environmental concept

Unit-2:Ecology and Ecosystem

1. චංක්‍රොදෝනා තැබෙන ඉඩන්තියා

Concept of Ecosystem,

2. චංක්‍රොදෝනා තැබෙන ගිණුම් එහි ප්‍රාග්ධනය

structure and functions of ecosystem

3. උනුපත්වල ඉඩන්තියා එහි චැබෙන ප්‍රාග්ධනය

Environmental pollution and degradation:

4. වෘත්ති, ඉඩන්තියා එහි වෘත්ති ඉඩන්තියා

Land, water and air pollutions

Unit-3:Man-Environment conflict

1. ප්‍රාග්ධන-ජාත්‍යන්තර එහි රුජ. ඇඟ්. උ ප්‍රාග්ධනය ප්‍රාග්ධන තැබෙන

Man Animal Conflict with special reference to Junglemahal area

2. උනුපත්වල තැබෙන ප්‍රාග්ධන එහි ප්‍රාග්ධනය

environmental problems:Local,regional and global

3. උනුපත්වල තැබෙන ප්‍රාග්ධන එහි ප්‍රාග්ධනය

Urban environmental issues with special reference to waste management

4. උනුපත්වල ප්‍රාග්ධනය එහි ප්‍රාග්ධන-ප්‍රාග්ධනය එහි ප්‍රාග්ධන-ප්‍රාග්ධනය

Environmental programmes and policies–Global, national levels

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1.10 SHGEO/403/C-10P:Environment Geography Lab

Environment Geography

List of Practical

A Project File, comprising on eexercise each is to be submitted

1. Preparation of questionnaire for perception survey on environmental problems
2. Preparation of check-list for Environmental Impact Assessment of an urban/industrial project
3. Quality assessment of soil using field kit: pH and Organic Carbon
4. Interpretation of air quality using CPCB/WBPCB data

Reference Books

- Morgan R.K. 2002: Environmental Impact Assessment: A Methodological Perspective, Kluwer Academic Publishers, London
- Eccleston C.H. 2011: Environmental Impact Assessment: A Guide to Best Professional Practices, CRC Press, New York
- Gilpin.A (1994) Environmental Impact Assessment: Cutting Edge for the 21st Century (Eia : Cutting Edge for the Twenty-First Century, Cambridge University Press,
- CPCB Reports, Ministry of Environment, Forest and Climate Change, Govt. Of India, <http://www.cpcb.nic.in/Publications.php>

SEMESTER-V

FULL MARKS-200

HGEO/501/C-11: Evolution of Geographical Thought

COURSE CODE:HGEO/501/C-11

CREDIT-6

Course Objectives and Course Outcome:

1. Perceive the evolution of the philosophy of Geography.
2. Appreciate the contribution of the thinkers in Geography.
3. Give power point presentations on different schools of geographical thought.
4. Discussing the evolution of geographical thought from ancient to modern times.
5. Establishing relationship of Geography with other disciplines and man-environment relationships.
6. Analyzing modern and contemporary principles of Empiricism, Positivism, Structuralism, Human and Behavioral Approaches in Geography

1.11HGEO/501/C-11: Evolution of Geographical Thought

Unit-1:Development of Geography

- 1 ക്രമേണ്ട്, പരമാർഥം അം തോറുന്ന വിശദം എങ്കിലും ആണ്
Definition, Scope and Content of Geography
- 2 തോറുന്ന നേരം.അ - പഠ.വർഷ അം പാരമാണ സിദ്ധം
Development of Geography in the Ancient and Mediaeval Periods
- 3 ദാഖലം കഴഞ്ചിത്താണ് തോറുന്ന നേരം.അ എ ക്രമേണ്ട് വിശദം വിശദം അം സാഹിത്യം ചുവരും
Development of Modern Scientific Geography in the 19th Century with particular reference to the Contributions of Humboldt and Ritter
- 4 20 ക്രമേണ്ട് വിശദം നേരം.അ; പഠികൾ മാത്രമല്ല അം ദശാം വിശദം വിശദം ഹാർഡിംഗ്
Development of Geography in the 20th Century: Quantitative Revolution and it's impact

Unit-2:Development of Schools of Thought in Modern Geography

- 1 സംസ്കാര റാച്ചുട്ടാ.ബോൾ
German School
- 2 ഫ്രാൻസിൽ റാച്ചുട്ടാ.ബോൾ
British School
- 3 അമെരിക്കൻ റാച്ചുട്ടാ.ബോൾ
American School
- 4 ഭാരത റാച്ചുട്ടാ.ബോൾ
Indian School

Unit-3:Concepts and Trends in Geography

- 1 ദാരശംഖാശ റാച്ചു വിശദം ഉദാഹരിച്ച, ക്രപരിച്ചായും അം ദാഖലം
ദാരശംഖാശം ഉദാഹരിച്ച
Concepts of Determinism, Possibilism and Neo-Determinism
- 2 അവിജാതേഖാശം വിശദം ഉദാഹരിച്ച അം ഹാർഡിംഗ് ഉദാഹരിച്ച
Concepts of Empiricism and Positivism
- 3 തോറുന്ന ക്രാഡ്യാം വിശദം ഉദാഹരിച്ചാം: ദശാം റാച്ചു ഉദാഹരിച്ച അം സിദ്ധം
പാരമാണ ക്രാഡ്യാം ഉദാഹരിച്ച
Approaches to Geographic Studies: Systematic vs Regional approach
- 4 ദാഖലം തോറുന്ന വിശദം ഉദാഹരിച്ച, ദാഖലം-ഓൺലൈൻ
Recent trend in Geography: Feminism, Post-modernism

Reference Books

- ArentsenM.,StamR.andThuijsR.,2000:Post-modernApproachestospace,ebook.
- Bhat,L.S.(2009)GeographyinIndia(SelectedThemes).Pearson

- BonnettA.,2008:WhatisGeography?Sage.
- DikshitR.D.,1997:GeographicalThought:AContextualHistoryofIdeas,Prentice–HallIndia.
- HartshoneR.,1959:PerspectivesofNatureofGeography,RandMacNallyandCo.
- Holt-JensenA.,2011:Geography:HistoryandItsConcepts:AStudentsGuide,SAGE.
- JohnstonR. J.,(Ed.):DictionaryofHumanGeography,Routledge.

- JohnstonR.J.,1997:GeographyandGeographers,Anglo-AmericanHuman
Geographiesince1945,Arnold,London.
- KapurA.,2001:IndianGeographyVoiceofConcern,ConceptPublications.
- MartinGeoffreyJ.,2005:AllPossible Worlds:AHistoryofGeographicalIdeas,Oxford.
- Soja,Edward1989.Post-modern
Geographies,Verso,London.Reprinted1997:RawatPubl.,JaipurandNewDelhi.

COURSE TITLE: Remote Sensing (MARKS-50)

COURSE CODE:SHGEO/502/C-12T

Credit: 4

Course Objectives and Course Outcome:

- 1.Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes.
- 2.Interpret satellite imagery and understand the preparation of false color composites from them.
- 3.Training in the use Geographic Information System (GIS) software for contemporary mapping skills.
- 4.Analyzing and interpreting remotely sensed satellite images and aerial photographs in order to understand topographical and cultural variations on the Earth's surface.
5. Conducting field excursions and preparation of field report on research on problem in different areas of India
- 6.Apply GIS to the preparation of thematic maps.
7. Use GNSS.

1.12 SHGEO/502/C-12T: Remote Sensing

Unit-1:Remote Sensing:Basic Concepts

1. උනුදහන්මල ඉංජිනෙරුවන්ගේ: ඉනෑස් නැංතු මහජන., උනුදහන්වල උතු සුපු-
යනුවන් උනු.ඩී.ආ, රුධාරු නැංතු අ.ඩී, පැවතාගත්වයේ: උපැල්ගත්,
ශෝංගන්වය, නැංතුගත්වයේ එක තුළපුවන්වය
Basic Concepts: Energy Sources, Interactions with Atmosphere, Sensing Systems, Resolutions:
Spatial,Spectral, Radiometric and Temporal
2. උතුවලුත්ම ප්‍රාගථ්‍රී තොරතු තොරතුව තොරතුව නැංතුව තොරතුව
Principles of preparing Standard False Colour Composites
3. පැවතා මුද්‍රණය නැංතුව තොරතුව එක මාගිණිය.ඩ නම තුළු,
රුධාරු පැවතා, රුධාරු තොරතුව (ඡු. පැවතා. ඡු. උං.) මාගිණිය.ඩ මුද්‍රණ උතුවෙනුවන් පැවතා තොරතුව
Principles of image interpretation and feature extraction. Preparation of inventories of
landuse landcover(LULC)features from satellite images.
4. ඊට්‍යාගත්ම පැවතා මුද්‍රණය: උතුවලුත්ම පැවතා, උතුවෙනුවන් උග්‍රෝදේශීයන්
Digital Image Processing:Subset Image, Spectral Signature,
5. මැගෝන්.ඩ ටො.ගැඹා: උතුවෙනුවනුවනුව එක මැල්‍යාංශනුවනුවනුව
Image Classification:Supervised and Unsupervised

Reference Books

- CampbellJ. B., 2007: IntroductiontoRemoteSensing,GuildfordPress.
- JensenJ.R.,2004:IntroductoryDigitalImageProcessing:ARemoteSensingPerspective,Prentice Hall.
- Joseph,G.2005:Fundamentals of RemoteSensing,UnitedPressIndia.
- LillesandT.M.,KieferR. W.andChipman J.
W.,2004:RemoteSensingandImageInterpretation,Wiley.(WileyStudentEdition).
- NagP.andKudra,M.,1998:DigitalRemoteSensing,Concept,New Delhi.
- ReesW.G.,2001:PhysicalPrinciplesofRemoteSensing,CambridgeUniversityPress.
- SinghR.B.andMuraiS.,1998:Space-informaticsforSustainableDevelopment,OxfordandIBHPub.
- WolfP.R.andDewittB.A.,2000:ElementsofPhotogrammetry:WithApplicationsinGIS,McGraw-Hill.
- Sarkar,A.(2015)Practicalgeography:Asystematicapproach.OrientBlackSwanPrivateLtd.,NewDelhi

1.12SHGEO/502/C-12P:Remote Sensing Lab

Remote Sensing and GIS

- Practical works are to be completed in the classroom.
- Works are to be done in Computer in appropriate software
- Hardbound Copy of A4 Size with computeryped sheets supplemented with maps and diagrams

List of Practical:

A Project File, comprising of exercises each is to be submitted

1. Georeferencing of maps and images; Subset image
2. Image enhancement. Preparation of reflectance libraries of LULC features across different image bands of IRS13 or Landsat-8OLI data
3. Image classification, post-classification analysis and class editing
4. Application of Remotely Sensed data on River Course, Forestry and Urban Growth Mapping

**SEMESTER-VI
FULL MARKS-200**

COURSE TITLE: Disaster Management (MARKS-50)

COURSE CODE: SHGEO/601/C-13T

CREDIT-4

Course Objectives and Course Outcome:

1. Understand the nature of hazards and disasters.
2. Assess risk, perception and vulnerability with respect to hazards.
3. Prepare hazard zonation maps.
4. Assessing the nature, impact and management of major natural and man-made hazards affecting the Indian subcontinent.

1.13 SHGEO/601/C-13T: Disaster Management

Unit1:Concepts in Theory

1.13.1 ແລະທົບກອກຂອບ ຂົນສົມເຕ ອີ່ ພັດທະນາທິບ ນະຄະທິບ ປະເວດ ອີ່ ຊັນຍິດທີ່

Meaning and concept of hazard and disaster

1.13.2 ແລະທົບກອກຂອບ ຂົນສົມເຕ ອີ່ ພັດທະນາທິບ ນະຄະທິບ ຢົກ.ກາງ

Classification of hazards and disasters.

1.13.3 ແລະທົບກອກຂອບ ຂົນສົມເຕ ແຫ່ງພົມທິບ ນະຄະທິບ ຊົກລັກກາວຄົມໄດ້: ນກບລ ອີ່
ຫຼັກຊາທິດຈຳ ອີ່ ວິຊ ນະຄະທິບ ດັບປະກິບ

Approaches to hazard study: Risk perception and vulnerability assessment.

1.13.4 ແລະທົບກອກຂອບ ຂົນສົມເຕ ນະຄະທິບ ຊົກລັກກາວຄົມ ລວມ

Hazard paradigms.

Unit2:Disaster Case Studies

1. ອີ່ ອົບລົບ: ລູກໂທທິບ ລວມ, ອົດທະລົບ, ແລະທົບຜົນການ ອີ່ ລົບປາກທິບ ມີສົມທິດທີ່
Earthquake: Factors, vulnerability, consequences and management
2. ອີ່ ຊົດໜ້າທິບ: ລູກໂທທິບ ລວມ, ອົດທະລົບ, ແລະທົບຜົນການ ອີ່ ລົບປາກທິບ ມີສົມທິດທີ່
Landslide:Factors, vulnerability, consequences and management
3. ວິທະຍານມຸດ: ລູກໂທທິບ ລວມ, ອົດທະລົບ, ແລະທົບຜົນການ ອີ່ ລົບປາກທິບ ມີສົມທິດທີ່
Cyclone: Factors, vulnerability, consequences and management
4. ລົບເກີດ: ລູກໂທທິບ ລວມ, ອົດທະລົບ, ແລະທົບຜົນການ ອີ່ ລົບປາກທິບ ມີສົມທິດທີ່
Fire: Factors, vulnerability, consequences and management

Unit2: Disaster Management in India

1. ວິປາກທິບ ກົກເກີດ ນະຄະທິບ ນະຄະທິບ ພັດທະນາທິບ
2. ບ່ານອັນ ເຮັດວຽກ ລູກໂທທິບ ອີ່ ນະຄະທິບ ພັດທະນາທິບ
3. ສັງເກດ ກົກເກີດ ນະຄະທິບ ນະຄະທິບ ພັດທະນາທິບ
4. ເມືອງນັກ ຂໍາລັບ ນະຄະທິບ ຂົນສົມເຕ ອົດທະລົບ ມີສົມທິດທີ່

Hazard Mapping in India

Reference Books

- Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
- Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
- Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
- Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
- Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
- Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
- Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications, Dordrecht.

COURSE TITLE: Research Methodology and Field Work

COURSE CODE: SHGEO/602/C-14T

CREDIT-4

Course Objectives and Course Outcome:

1. Have expertise in identification of area of study, methodology, quantitative and qualitative analysis, and conclusions to be drawn about the area – fundamental to geographical research.
2. Handle logistics and other emergencies on field.
3. Develop skills in photography, mapping and video recording.

1.14SHGEO/602/C-14T:Research Methodology and Field Work

Unit1:Research Methodology

- 1.14.1 በዚህ ላይ የሚያስረዳ ነው ንብረቱ: በዚህ, ወጪን በኋላ መሆኑ
Research in Geography: Meaning, types and significance
- 1.14.2 ለማዘመዱ ዓይነት ቅጽዎች በኋላ ክፍል ቅጽናዎች ለማሳወቅ ስራዎች
Literature review and formulation of research design
- 1.14.3 ተፈጥሮችናዎች ስነዎች, ለማዘመዱ, ክፍል ቅጽናዎች በኋላ ተከተለዋል,
የወጪዎች ስት በኋላ ተ.ኩን ስት
Defining research problem, objectives and hypothesis. Research materials and methods
- 1.14.4 ለዝርሱን የገዢዎች በኋላ የሚያስረዳ ቅጽናዎች: ይጠበኝና, የጽሑፍናኝነዎች,
የገዢዎች የሚያስረዳ ቅጽናዎች በኋላ ተ.ኩን ስት
Techniques of writing scientific reports: Preparing notes, references, bibliography, abstract and keywords

Unit2: Field Work

1. በዚህ ላይ የሚያስረዳ ነው ክፍል ቅጽናዎች ለማበገኙዎች – ክፍል ቅጽናዎች ለማበገኙዎች አቅዱ
የወጪዎች በኋላ ክፍል ቅጽናዎች ስት, ክፍል ቅጽናዎች ለማበገኙዎች የወ.ገዢ በኋላ የሚያስረዳ
Field work in Geographical studies–Role and significance. Selection of study area and objectives. Pre-field preparations.
2. ለማበገኙዎች ክፍል ቅጽናዎች ለወጪዎች ለማበገኙዎች ለማበገኙዎች ስት በኋላ ለማስቀባበዎች
ሁሉ: ዓይነት (participant,non-participant), ንግድ ንግድ (open, closed, structured, non-
structured), ንግድ ስምምነት ለማበገኙዎች ማረጋገጫ የሚለውን ማስረጃ ማረጋገጫ ማስረጃ
ማስረጃዎች, ስምምነት ዘዴዎች ማረጋገጫ ስምምነት ማረጋገጫ ማስረጃዎች በኋላ
መስጠትና
3. ክፍል ቅጽናዎች ለማበገኙዎች ለማበገኙዎች ስት በኋላ ለማስቀባበዎች: ሂሳብዎች. በዚህ ለመስጠት
ማስቀባበዎች ስምምነት ማረጋገጫ ስምምነት ማረጋገጫ, የሚመለከት ስምምነት, ማስረጃ በኋላ
የማስቀባበዎች ስምምነት
4. ክፍል ቅጽናዎች ለማበገኙዎች ለማበገኙዎች ስምምነት ማረጋገጫ ስምምነት ማስረጃዎች
የሚመለከት ስምምነት, ክፍል ቅጽናዎች ለማበገኙዎች ስምምነት ማረጋገጫ ስምምነት
Preparation of inventory from field data.Post-field tasks.

Reference Books

- Creswell J., 1994: Research Design: Qualitative and Quantitative Approaches Sage Publications.
- Dikshit, R.D. 2003. The Art and Science of Geography: Integrated Readings. Prentice-Hall of India, New Delhi.
- Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in Qualitative Method in Human Geography, eds. J. Eyles and D. Smith, Polity.
- Mukherjee, Neela 2002. Participatory Learning and Action: with 100 Field Methods. Concept Publs. C o., New Delhi
- Robinson A., 1998: "Thinking Straight and Writing That Way", in Writing Empirical

Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles. Special Issue on "Doing Fieldwork" The Geographical Review 91:1-2 (2001).

Stoddard R.H., 1982: Field Techniques and Research Methods in Geography,

Kendall/Hunt.

- Wolcott, H. 1995. The Art of Fieldwork. AltaMira Press, Walnut Creek, CA
- Beaumont, J.R. and Williams, S.W. 1983. Project Work in the Geography Curriculum, Croom Helm, London, 332p

SHGEO/602/C-14P: Research Methodology and Field Work Lab

List of Practical:

1. Each student will prepare an individual report based on primary data collected from field survey and secondary data collected from different sources for either a rural area (mouza) or an urban area (municipal ward) based on cadastral or municipal map to study specific problems.
2. The duration of the fieldwork shall not exceed 10 days

Report writing with the following Tentative Chapter Schemes Preface & Acknowledgement

Introduction: Objective,

Extent and Space Relations, Data Sources and Methodology Physical Environment: Lithology, Drainage, Slope, Climate, Soil, Vegetation etc.

Socio-Economic Environment: Population Characteristics, Occupational Structure, Ethnic and Religious Composition, Per-Capita Income, any other aspects.

Problems and Prospects Bibliography

Appendix: Survey Questionnaire(s), Additional Tables if any

Design & Word Limit: Computer Typed, Line Spacing 1.5 Font - Arial/Times New Roman/Calibri, Size-

12, Word Limit: 5000 (Excluding Tables and Appendix).

3. A copy of the bound report, duly signed by the concerned teacher, should be submitted

4. Presentation

Individual student has to submit one Power Point Presentation on the Report and has to present in front of External Examiner with the following slides:

1.14.4.1 Title

- 1.14.4.2 Aims and Objectives
- 1.14.4.3 Data Sources and Methodology

1.14.4.4 Important Diagrams and Maps included in the report

- 1.14.4.5 Major Problems
- 1.14.4.6 Suggestions

Time allotted for Presentation will be not more than 10 minutes followed by Interactive session of not more than 5 minutes.

ACD of the ppt file has to be submitted mentioning the Roll No and Registration No of each student. The same has to be submitted by the Centre in Charge to the Chairman of the said paper.

Reference Books

- Monkhouse, F.J. and Williamson, R.H. (1963): Maps and Diagrams: Their Compilation and Construction, Methuen, London
- Saha, P.K. and Basu, P. (2009): Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata
- Sarkar, A. (2008): Practical Geography: A Systematic Approach, Orient Black Swan, Kolkata
- Narasinha Murthy, R.L. (2014): Research Methodology in Geography, Concept, New Delhi
- Saha, P.K. and Basu, P. (2009): Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata
- Sarkar, A. (2008): Practical Geography: A Systematic Approach, Orient Black Swan, Kolkata
- Yeates M., 1974: An Introduction to Quantitative Analysis in Human Geography.

2. Department Specific Electives Subjects Syllabus

COURSE TITLE: Hydrology and Oceanography (MARKS-50)

COURSE CODE: SHGEO/504/DSE-1

CREDIT-6

Course Objectives and Course Outcome:

- Analyse the concepts of Hydrology and Oceanography.
- Emphasizing the significance of groundwater quality and its circulation.
- Evaluate the role of the global hydrological cycle. Studying the behavior and characteristics of the global oceans.
- Realize the importance of water conservation.

- Identify marine resources and characteristics of ocean waters.
- Interpret hydrological and rainfall dispersion graphs and diagrams.

2.1 SHGEO/504/DSE-1: Hydrology and Oceanography

Unit 1: Hydrology

1. ඉන්දු රැංසුන්. නිලධාන සංකීර්ණයෙන්දෙයි, ඉඩන්.වැං සංඝානී නිලධාන සංකීර්ණ ක්‍රමීකරණයේ, උච්චා නිලධාන සංකීර්ණ මෘත්‍යවාගොජ්‍ය ත්‍යා සාරුණුවාගොජ්‍ය නිලධාන සෑසාය,

Systems Approach in hydrology. Global hydrological cycle: Its physical and biological role

2. ඉන්දු ට.ඩො නිලධාන උගැනීසුන්දී නෑ, ඉන්දු රැංසුන්.ව තුරුප ත්‍යා මෘත්‍යවාගොජ්‍ය ඉඩන්.ව.ඩො මෘත්‍ය යිත්තාන්ද,

Run off: controlling factors. Infiltration and evapotranspiration. Run off cycle

3. ඔක්සැස්නිං මුළුගස ත්‍යා ස්ථාන, ඉඩන් ලැබුණුවා නිලධාන ත්‍යා මෘත්‍ය ත්‍යා ප්‍රාග්ධනය මෘත්‍ය මුළුගස මෘත්‍ය ප්‍රාග්ධනය

Drainage basin as a hydrological unit. Principles of water harvesting and watershed management

4. ගොනුවනුවයා: මෙහෙනුව ත්‍යා ලැබුණුවා, ත්‍යා මෘත්‍ය මෘත්‍ය මෘත්‍ය ප්‍රාග්ධනය මෘත්‍ය උගැනීසුන්දී නෑ

Groundwater: Occurrence and storage. Factors controlling recharge, discharge and movement.

Unit 2: Oceanography

1. ඉන්දුලේ ප්‍රාග්ධනය නිලධාන ප්‍රාග්ධනය නෑ: යන්.වැං නෑ තුරුනු නිශ්චිතයා ප්‍රාග්ධනය ප්‍රාග්ධනය,

Major relief features of the ocean floor: characteristics and origin according to plate tectonics.

2. ඉන්දුලේ ඉන්දු නිලධාන ප්‍රාග්ධනය ත්‍යා ප්‍රාග්ධනය නෑ

Physical and chemical properties of ocean water

3. ඉන්දු ප්‍රාග්ධන, නැග-ශ්‍රේ මුහුදුනෙනුව

Water mass, T-S diagram

4. ඉන්දුලේ ප්‍රාග්ධන ත්‍යා ප්‍රාග්ධනය: ප්‍රාග්ධනය ත්‍යා උගැනීසුන්දී නෑ
Ocean temperature and salinity: Distribution and determinants.

Unit 3: Ocean resources and sea level change

1. මුහුදුනෙනු මුහුදුනෙනු: මුහුදුනෙනු, මුහුදුනෙනු ත්‍යා ඉඩන්ටැල්

Coral reefs: Formation, classification and threats

2. මුහුදුනෙනු උම්බනුවා: මුහුදුනෙනු ත්‍යා මුහුදුනෙනු උම්බනුවා

Marine resources: Classification and sustainable utilization

3. වෘත්තානුව නිලධාන ඉඩන්වනුව ත්‍යා සාමූහික

Concept of wave and tide

4. ଜୀବିତର ପାଇଁ ପାଇଁଥିଲାଏ: ଯତ୍ନଗ୍ରୀ ଅଛି କିମ୍ବା ବେଳେ

Sea level change: Types and causes

Reference Books

- Andrew.D.WardandStanley,Trimble(2004):EnvironmentalHydrology,2ndedition,LewisPublishers,CRCPress.
- Karanth,K.R.,1988:GroundWater:Exploration,AssessmentandDevelopment,Tata-McGrawHill,NewDelhi.
- Ramaswamy,C.(1985):Review offloodsinIndiaduringthepast75 years:APerspective.IndianNationalScienceAcademy,NewDelhi.
- Rao,K.L.,1982:India'sWaterWealth2ndedition,OrientLongman,Delhi,
-
- Singh,VijayP.(1995):EnvironmentalHydrology.KluwerAcademicPublications,theNetherlands.
- AnikouchineW.A.andSternbergR. W.,1973:The WorldOceans:AnIntroduction to Oceanography,Prentice-Hall.
arrisonT.,1998: Oceanography,WordsworthCompany,Belmont.
KershawS.,2000:Oceanography:AnEarthSciencePerspective,StanleyThornes,AndUK.
PinetP.R.,2008:InvitationtoOceanography(FifthEdition),JonesandBarlettPublishers,USA,UK andCanada.
SverdrupK.A.andArmrest,E.V.,2008:AnIntroductiontotheWorldOcean,
McGrawHill,Boston.

Singh,M.,Singh,R.B.andHassan,M.I.(Eds.)(2014)Landscapeecologyand
watermanagement.ProceedingsofIGURohtakConference,Volume2.AdvancesinGeographicalandEnvironmentalStudi
es,Springer

COURSE TITLE:Cultural and Settlement Geography (MARKS-50)

COURSE CODE:SHGEO/503/DSE-2

CREDIT-6

Course Objectives and Course Outcome:

The primary aim of studying settlement geography is to acquaint with the spatial and structural characteristics of human settlements under varied environmental conditions. The paper deals with multi disciplinary perspectives on the formation, evolution of human settlement. The paper will help the students to make an understanding on the reasons people settle in certain locations and the geographical features lead to the development of civilizations. The Nature and Scope of Settlement Geography, Characteristics of Rural and Urban Settlements according to Indian Census and nature, scope, evolution and several study methods. The settlement types, pattern and nature and process of urban settlement ,different cultural landscapes

2.2 SHGEO/503/DSE-2: Cultural and Settlement Geography

Unit -1: Cultural Geography

1. උමඳෙන්, සහිතයා තුළ පථයින් මැදහැර එක්සෑම්ප්‍රෝලොජිජ්‍යා මැදහැර යොඩු නොවූ උමඳෙන් යොඩු නොවූ උමඳෙන් යොඩු නොවූ

Definition, scope and content of Cultural Geography, development of cultural geography in relation to allied disciplines

2. පථයින් වැටුණු තුළ පෘතුව; පථයින් මැයියාරුලුව, පථයින් උග්‍රීයුලුව තුළ පථයින් එමඳියාමුව, ඉඩන්.නොඩ පෘතුව ඉඩන්යාප තුළ පෘතුව මැයියාරුලුව පෘතුව නොවූ

Cultural Hearth and Realm; Cultural Diffusion, Cultural Segregation and Cultural Diversity, Diffusion of major world religions and languages

3. පථයින්, පෘතුව එක්‍රීයා එක්‍රීයා. තුළ නොවූ.

Culture, Technology and Development.

4. නැං.නොඩ නොවූ ඉඩන්.නොඩ පෘතුව නොවූ නැං.නොඩ පෘතුව නොවූ

Races and racial groups of the world

Unit 2: Rural Settlement

1. මැදහැර ගෙවන්.ඩාඩ්: මැදහැර ගෙවන්.ඩාඩ් බැඳෙනු ලැබේන්, පෘතුව තුළ යොඩු නොවූ

Rural Settlement: Definition, nature and characteristics of rural settlements

2. මැදහැර ගෙවන්.ඩාඩ් බැඳෙනු පහැදිලිවායා: නැංචා තුළ එමඳියාමුව, ඉඩන්යාප තුළ එන්ඩ්වැස එඩ්ඩ් බැඳෙනු ලැබේන් පෘතුව නොවූ

Morphology of rural settlements: site and situation, layout-internal and external

3. Rural house types with reference to India, Social segregation in rural areas;

4. වෘත්ත පෘතුව යොඩු පෘතුව මැදහැර ගෙවන්.ඩාඩ්

Census categories of rural settlements.

Unit-3: Urban Settlement

1. උමඳෙන් ගෙවන්.ඩාඩ්: රුධ්‍යාවන් ඉඩන්යාප වෘත්ත පෘතුව යොඩු පෘතුව මැදහැර ගෙවන්.ඩාඩ් (Temporal) තුළ යොඩු

Urban Settlements :Census definition (Temporal) and categories in India

2. ରାଜ୍ୟର ପାଶିଦାରାଙ୍ଗନ: ବ୍ୟକ୍ତିଗତ ପ୍ରେସର-ଯଥିଲୁଗୁ, ମେଡିଆ ମହିଳା, ମହିଳା ଆଜିର ବ୍ୟକ୍ତିଗତ ଅବଧି ଅବଧିରେ ପରିବର୍ତ୍ତନ ଆଜିର ଉଦ୍ଦିଷ୍ଟ ପରିବର୍ତ୍ତନ

Urban morphology: Classical models-Burgess, Homer Hoyt, Harris and Ullman Metropolitan concept.

3. ରାଜ୍ୟର ଟାଇପ୍ ଆଜି ବେଳାନ୍ତିରୁକ୍ତି

City-region and Conurbation

4. ରାଜ୍ୟର ବ୍ୟକ୍ତିଗତ ବ୍ୟକ୍ତିଗତ ମୋଟ ମହିଳା: ମହିଳା, ମୋଟାମୁଦ୍ରା ଆଜି ଆଜିର ମହିଳା

Functional classification of cities: Harris, Nelson and Mackenzie

Reference Books

- BanerjeeGuha,S.ed(2004)Space,Society&Geography,RawatPublication,Delhi
- Bardhan,P.,2003,Poverty,AgeStructure&PoliticalEconomyinIndia,OxfordUniversityPress
- Biswas,A.K.,Jortajada,C.,2006,AppraisingSustainableDevelopment,OxfordUniversity
- Dhanagare,D.N.,2004,ThemesandPerspectivesinIndianSociology,RawatPublication,Delhi
- Dohrs,I.,Sommers,L.,1967,CulturalGeography.ThomasCrowellCompany

- Fellmann,J.D.,Getis,A.,Getis,J.,2000,HumanGeography-LandscapeofHumanActivity,McGrawHill
- Fern,R.L.,2002,Nature,GodandHumanity,CambridgeuniversityPress
- Gadhil,M.,Guha,R.,2000,TheUseandAbuseofNature,OxfordUniversityPress
- Gregory,D.,Urry,J.,1985,SocialRelationandSpatialStructure,MacMillan
- Herbert,D.T.,Johnston,R.J.,1982,GeographyandUrbanEnvironment.JohnWiley&Sons
- Hussain,M.,2007,ModelsinGeography,RawatPublication
- Jordan,T.,Rowntree,L.,1990,HumanMosaic,HarperCollinsPublishers
- Knox,P.,Pinch,S.,2000,UrbanSocialGeography,PearsonEducation
- Mitchell,D.2000,CulturalGeography-ACriticalIntroduction,BlackWell.

COURSE TITLE:Urban Geography (MARKS-50)

COURSE CODE:SHGEO/503/DSE-2

CREDIT-6

Course Objectives and Course Outcome:

This paper will provide knowledge on spatial analysis of functions of urban areas. Social and economic characteristics of cities and suburbs will be discussed under this paper. Urban land use and its impact on environment and ecology will be addressed. This paper will introduce students to the basics of urban geography, such as definition of cities, central place theory, National urban systems, and traditional models of urban spatial structure. More importantly, students will be exposed to contemporary urban topics such as global cities, urban sprawling, urban green space, urban ecology and footprints etc. Emphasis will be placed on the urban experience of developing countries, especially India. The students will be able to assemble knowledge of urbanism and urbanization as historic, geographic, social, and cultural processes, historical development, contemporary condition, and environmental impact of cities and urban related issues growing from exposure to the disciplines of Geography and Planning

2.3 SHGEO/503/DSE-2:Urban Geography

Unit -1: Basic concepts

1. උන්ගේ තොරතු: ජාත්‍යන්තර අව සිංහල නිරූපණ ඉඩැගැමුණුවල අව උන්ගේ තොරතු පෙනෙන ගොන් ජාත්‍යන්තර

Urban Geography: nature and scope, different approaches and recent trends in urban geography

2. උන්ගේ පෙනෙන මාධ්‍ය. නැණු එස්ට්‍රොඩ්, ඕනෑම මාධ්‍ය, උන්ගේ අව උන්ගේ පෙනෙන මාධ්‍ය නී, ඕනෑම නී අව යුතු නී,

Origin of urban places in Ancient, Medieval, Modern and Post-Modern periods- factors, stages, and characteristics.

3. උන්ගේ මගිනිවෝල පෙනෙන මෙහෙයුම නී අව මෘ.ඩී: වෘත්තිකාරී මෙහෙයුම අව නී. මෘදු මෙහෙයුම

Theories of Urban Evolution and Growth: Hydraulic Theory, Economic Theory

4. උන්ගේ යන්දන්නාවා: එස්ට්‍රොඩ් මුද්‍රා මෙහෙයුම; එන්ඩ්‍රේ පෙල අව ප්‍රත්‍යාග්‍රහණ එස්ට්‍රොඩ් මෙහෙයුම

Urban Hierarchies : Central Place Theory; August Loch's theory of Market Centres

Unit -2: Urban Processes

1. උන්ගේ මෘ.ඩී නිස මෘදුව මගිනි. එම මෘදු: උන්ගේ පෙනෙනා; උන්ගේ නිරාක්‍රිත

Ecological processes of urban growth; Urban fringe; City- Region

2. ରାଜ୍ୟର ଶେଷାଳେ ନେତ୍ରପାତ୍ର କାମ କରିବାର ପାଇଁ ଏହାର ପରିଧି ଅଧିକାର କରିଛି ଏହାର ପରିଧି ଅଧିକାର କରିଛି

Theories of city structure-concentric zone theory, sector theory, multiple nuclei theory

3. ଅବଶ୍ୟକ ଗୁଡ଼ିକ ଥିଲୁ କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି: ଗୁଡ଼ିକ, ଗୁଡ଼ିକ ଥିଲୁ ଉପରେ କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି: ନେତ୍ରପାତ୍ର କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି: ନେତ୍ରପାତ୍ର କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି:

Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, The Law of the Primate City

4. ରାଜ୍ୟର ଶେଷାଳେ ନେତ୍ରପାତ୍ର କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି ଏହାର ପରିଧି ଅଧିକାର କରିଛି

Unit 3: Urbanization in India

1. ରାଜ୍ୟର ଶେଷାଳେ: ଶେଷାଳେ କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି ଏହାର ପରିଧି ଅଧିକାର କରିଛି

Urban Issues: problems of housing, slums, civic amenities (water and transport)

2. ରାଜ୍ୟର ଶେଷାଳେ କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି ଏହାର ପରିଧି ଅଧିକାର କରିଛି

Patterns and trends of urbanization in India

3. ରାଜ୍ୟର ଶେଷାଳେ କାମ କରିବାର ପରିଧି: ରାଜ୍ୟର ଶେଷାଳେ କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି ଏହାର ପରିଧି ଅଧିକାର କରିଛି

Policies on urbanization. Urban change/landscape in post-liberalized period in India

4. ଦେଲି, କଳିମ୍ବା ଓ ଚନ୍ଦ୍ରପୁର ଶେଷାଳେ କାମ କରିବାର ପରିଧି ଅଧିକାର କରିଛି ଏହାର ପରିଧି ଅଧିକାର କରିଛି

Reference Books

- Fyfe N.R. and Kenny J.T., 2005: The Urban Geography Reader, Routledge.
- Graham S. and Marvin S., 2001: Splintering Urbanism: Networked Infrastructures, Technological Mobility and the Urban Condition, Routledge.
- Hall T., 2006: Urban Geography, Taylor and Francis.
- Kaplan D.H., Wheeler J.O. and Holloway S.R., 2008: Urban Geography, John Wiley.
- Knox P.L. and McCarthy L., 2005: Urbanization: An Introduction to Urban Geography, Pearson Prentice Hall New York.
- Knox P.L. and Pinch S., 2006: Urban Social Geography: An Introduction, Prentice-Hall.
- Pacione M., 2009: Urban Geography: A Global Perspective, Taylor and Francis.
- Sassen S., 2001: The Global City: New York, London and Tokyo, Princeton University Press.
- Press.
- Ramachandran R (1989): Urbanisation and Urban Systems of India, Oxford University Press, New Delhi
- Ramachandran, R., 1992: The Study of Urbanisation, Oxford University Press, Delhi Singh, R.B. (Eds.)

- (2001) Urban Sustainability in the Context of Global Change, Science Pub., Inc., Enfield (NH), USA and Oxford & IBH Pub., New Delhi.
- Singh, R.B. (Ed.) (2015) Urban development, challenges, risks and resilience in Asian megacities. Advances in Geographical and Environmental Studies, Springer

COURSE TITLE: Soil and Biogeography (MARKS-50)

COURSE CODE: SHGEO/504/DSE-3

CREDIT-6

Course Objectives and Course Outcome:

Learners will understand about functional integration of various process that results in formation and distribution of different types of soil and their implication of agricultural systems. They will be able to achieve integrated knowledge on soil and landscape. They will develop special aptitude on soil survey techniques to analyse spatio-temporal distribution of agricultural systems.

Students will get a comprehensive understanding about the plant species, process of degradation and regeneration of plants, animal dispersal. It also provides practical knowledge about the wildlife management strategies of India.

2.4 SHGEO/504/DSE-3: Soil and Biogeography

Unit 2: Soil -Geography

1. നാട്ടിനു പരമ്പരാഗണ സ്വഭാവങ്ങൾ ബുദ്ധി, നാട്ടിനു കാലം എന്നും പഠിക്കുന്ന ഒരു ശാഖ

Factors of Soil formation. Man as an active agent of soil transformation.

2. നാട്ടിനു പരമ്പരാഗണ, പരമ്പരാഗണ, പരമ്പരാഗണ, അഥവാ പരമ്പരാഗണ നാട്ടിനു പരമ്പരാഗണ നാട്ടിനു പരമ്പരാഗണ

Soil profile. Origin and profile characteristics of Lateritic, Podzol and Chernozem soils

3. ԵՇՈՅԵՆ ԻՆ ԱԺԿԻ ԽԾԱՔԻՆ ԵՑՄԱԳ ՀԵՏԱ: ՊԱԺԵՆԱՐԴԵ-ԳԵԽՈՎԻԾ, ԿԹԱՎՈՒԾԻ ԻՆ ԱԹԲԸՆՎՈՒԹԻ; ՄՇԱՅՈՒԹ- pH, Organic matter and NPK

Definition and significance of Soil properties: Physical - Texture, Structure and Moisture; Chemical - pH, Organic matter and NPK

4. ԱԺԿԻ ԱԺ.ԻՐԴ ՎՃԵՑՄ ՀԱՅՈՒ: ԽՃԵՑԿԱՅ ԻՆ USDA ԻԿ ՉԾԱԽՎԻԾԻ ԻՆ ԵՑՄԱԳ ՎՃԵՑՄ ԱԺ.ԻՐԴ

Principles of Soil classification: Genetic and USDA. Concept of land capability and its classification.

Unit 2: Bio-Geography

1. ԽԱՂԱ ԱԺՄԱՅՄՆ ԻԿ ՉԾԱԽՎԻԾԻ, ՄԺԼՈՒԹԵՎՈՆԹ, ՄԺԼՈՒ, ՀԵՅՐԵՆ, ԵԺԱՐԵՎԵՐՈՅ, ՄԺԼՈՒ ՄԱՎՈՒ.

Concepts of biosphere, ecosystem, biome, ecotone, community and ecology

2. ԽՎԽՎԱՋԱՅ ՋԵԶՈՎՈՒ ՎՃԵՑՄ ՉԾԱԽՎԻԾԻ, ԽՎԽՎԱ ԱՋԱՄ ԱՋԱՄ ԻՆ ԽՎԽՎԱ ԱՋԱՄ, ՄԺԼՈՒԹԵՎՈՆԹ ՎՀ ՉՖՈՅ ԽՎԽՎԱՅՈՒ

Concepts of trophic structure, food chain and food web. Energy flow in ecosystems

3. ԹՈԾՄԵՐԻՆ. ԽՈԼԵՐԱ ԻՆ ԱՋ.ՎՐԱ ԵԹ-ԽՎԽՎԱՅԵՐԸ ՎՀ.Ը ՊԱՏ, ՈՅԵՐԵՆ ԻՆ ԳԵՐԱՇԵՐԱԿԻ ՄԺԼՈՒՊ

Geographical extent and characteristic features of Tropical rain forest, Taiga and Grassland biomes

4. Bio-geochemical ԿԹԵԵՎԻ-ԵԺՎՈՒԹԵՎՈՒԹ ՄԵԼՌՈՒՐՈՒ ԻՆ ԵՑԼԵՎԱԿԱՀՑ
Bio-geochemical cycles with special reference to carbon dioxide and nitrogen

Unit 3: Human Behavior and its impact on Soil and Biosphere

1. ԱԺԿԻ ՎՀՀ ԻՆ ԵՇՈՅՈՒ: ԵՐԵՎԱՆԻՑԻ ԵԾ, Ա.ՎԱ ԵԾ ԻՆ ԵՑԱՎՈՒԾԻՆ

Soil Erosion and Degradation: Factors, processes and mitigation measures

2. ՊԱՏ ԵԹԱ ՎՃԵՑՄ ԹԻՆ ԵԾ: ԽՎԽՎԱՋԱՅՈՒ ԻՆ ԵՑԱՎՈՒԾԻ ՊՀՄԱԼՈՎԻՆ

Deforestation: Causes, consequences and management

3. ԽԱՂԱ-ՊԱԼՈՎՈՈՆԹ: ԵՇՈՅԵՆ, ԱԺ.ԻՐԴ ԵԾ, ԿԺՄԱՆԿ ԻՆ ՎԵԵՎԱՐՈՒ. ՉԻՄԱՐ ՎՃԵՑՄ ՀԹՀՈՎԻՆ ԵԾ

Bio-diversity: Definition, types, threats and conservation measures

4. ԵՑԱՎՈՒԾԻ ՊՀՄԱԼՈՎԻՆ ՎՀ ԵՑԱՎՈՒԾԻ ՎՃԵՑՄ ՉԱԼՈՎՈԾ

Response of society to the management

Reference Books

- Biswas,T.D.and Mukherjee,S.K.1997: TextbookofSoil Science, TataMcGrawHill,
- Brady,N.C.and Weil,R.R.1996.TheNatureandPropertiesofSoil,11thedition,Longman,London:
- Floth,H.D.1990.FundamentalsofSoilscience,8thedition,JohnWileyandSons,NewYork.
- Morgan,R.P.C.1995SoilErosionandConservation,2ndedition,Longman,London

- Schwab,G.O.,Fangmer,D.D.andElliot,W.J.1996.SoilandWaterManagementSystems,4thedition,JohnEileyandsonsInc.,NewYork
 - Young,A.2000.LandResource:NowandFuture,CambridgeUniversityPress,

 - Cambridge:332p.ChapmanJ.L.andRens,M.J.1993.Ecology:Principleand Applications,CambridgeUniversityPress,Cambridge:
 - Chairas,D.D.Reganold,J.P.andOwen,O.S.2002.NationalResourceConservationand management fora Sustainable Future,8thedition, PrenticeHall,EnglewoodCliffs
 - Dash,M.C.,2001.Fundamental ofEcology,2ndedition, TataMcGrawHill,NewDelhi
 - Huggett,R.1998.Fundamentals ofBiogeography, Routledge, London:
 - Kormondy, E.J. 1996. Concept of Ecology, 4th edition, Prentice- Hall, India, NewDelhi
 - Myers, A. A. and Giller, P.S. (editors) 1988. Analytical Biogeography: an Integrated Approach to the Study of Animal and Plant Distribution. Chapman and Hall, London
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COURSE TITLE:PopulationGeography (MARKS-50)

CREDIT-6

COURSE CODE:SHGEO/603/DSE-4

Course Objectives and Course Outcome:

- Identifying habitable parts of the world and different global population dynamics
- Explaining the correlation between man and man-made structures on the natural landscape.

2.5 SHGEO/603/DSE-4: Population Geography

Unit-1: Basic Concepts

1. മനുഷ്യരാജി അവലോകനം നടപ്പിലായി വരുമ്പോൾ കണക്കാക്കിയ കണക്കും മനുഷ്യരാജി അവലോകനം നടപ്പിലായി വരുമ്പോൾ കണക്കാക്കിയ കണക്കും

Development of Population Geography as a field of specialization. Relation between Population Geography and Demography.

2. වත්ත උමුවන් චක්‍රය නිලධාන රාජ්‍ය., තැබ්දාල් උමුවන් තුළ ප්‍රාග්‍රහණ තුළ යොමු කළ වෙළඳුව

Sources of population data, their level of reliability and problems of mapping.

3. වත්ත උමුවන් ප්‍රාග්‍රහණ: ඉන්නත්. එව එන්.ඩී, වත්ත ප්‍රාග්‍රහණ එව එන්.ඩී එහි ප්‍රතිශ්‍රාපිත එව උඩයන් චක්‍රය නිලධාන නේ, මුද්‍රාවන් නිවැරදි නිවැරදි නිවැරදි නිවැරදි නිවැරදි Population distribution: Density and growth. Classical and modern theories in population distribution and growth, Demographic Transition model.

4. ඉඩන්.නීඩ නිත්‍ය නිලධාන නිලධාන වත්ත උමුවන් එහි ප්‍රාග්‍රහණ ප්‍රාග්‍රහණ එව එන්.ඩී, සාම්පූහ වත්ත උමුවන් එහි ඉඩන්දී, රුධින්දී ඉඩන්දී නිලධාන වත්ත උමුවන් ප්‍රාග්‍රහණ,

World patterns of population distribution and growth. Concept of Optimum Population, population distribution in India.

Unit 2: Population Composition

1. වත්ත උමුවන් ප්‍රීගිඥය එව යින්.නො 0-5-5පැශ, නිත්‍ය ප්‍රීගිඥය, තැම එව උඩයන් එහි ප්‍රීගිඥය, එක්ස්සන්.0ය

Population Composition and Characteristics— Age, Sex Composition; Rural and Urban Composition; Literacy.

2. නිත්‍ය ප්‍රීගිඥය එව ග්‍රැන්ඩ් එහි උඩයන් නිලධාන නේ, පොයම් එහි ඉඩන්දී නිවැරදි නිවැරදි නිවැරදි නිවැරදි

Measurements of Fertility and Mortality. Concept of Cohort and Life Table

3. ඉඩන්දී ඉඩන්දී එහි වත්ත උමුවන් ප්‍රීගිඥය (පැශ, නිත්‍ය, තැම, උඩයන්, එව පැශ්‍ර ප්‍රීගිඥය)

Population composition of India (Age, Sex, Rural, Urban and occupational composition)

4. ප්‍රාග්‍රහණ ප්‍රීගිඥය: තැම එව යින්.නො 9, ඉඩන්දී ඉඩන්දී නිලධාන නිවැරදි නිවැරදි නිවැරදි නිවැරදි නිවැරදි

Migration: Causes and types, international patterns of migration with reference to India.

Unit 3: Population Policies

1. වත්ත උමුවන් එව 50එන්.ඩී: වත්ත උමුවන්—වත්ත උමුවන් තුළ ප්‍රීගිඥය, ප්‍රීගිඥය නැවත්තා එන්ඩ්‍රිඩ් (HDI) එහි ඉඩන්දී එව උඩුවන් නිලධාන නිවැරදි නිවැරදි නිවැරදි නිවැරදි

Population and Development: Population-Resource regions. Concept of Human Development Index (HDI) and its components.

2.பற.எப்படி நான்கு வகை ஏதேனும் பிரசரணம் செய்து விட விரும்புவது என

Population policies in developed and less developed countries

3.உடலங்கள் விரும்புவது ஏதேனும் பிரசரணம் செய்து விட விரும்புவது, மற்றும் கால மதுரை செய்து விட விரும்புவது கூடும் அல்லது சமீபத்திற்கு விரும்புவது என்பதை விடும்.

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

4.நான்குபாலுமொன்று கல்வி-நான்கு ஏதேனும் பிரசரணம் செய்து விட.பா; நான்குப் பிரசரணம் செய்து விட விரும்புவது; நான்குப் பிரசரணம் செய்து விட விரும்புவது என்று விடும் HIV/AIDS.

Contemporary Issues – Ageing of Population; Declining Sex Ratio; Population and Environment dichotomy, HIV/AIDS.

Reference Books

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- Bhende A. and Kanitkar T., 2000: Principles of Population Studies, Himalaya Publishing House.
- Chandna R. C. and Sidhu M. S., 1980: An Introduction to Population Geography, Kalyani Publishers.
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- Lutz W., Warren C. S. and Scherbov S., 2004: The End of the World Population Growth in the 21st Century, Earthscan
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- Pacione M., 1986: Population Geography: Progress and Prospect, Taylor and Francis.
- Wilson M. G. A., 1968: Population Geography, Nelson.

COURSE TITLE: Geography of Health and Wellbeing (MARKS-50)

COURSE CODE: SHGEO/604/DSE-4

CREDIT-6

Course Objectives and Course Outcome:

- Impletation of Medical Geography's Linkage between Health and Society, Taboo, Environment, Development, Education and Awareness
 - Health and Environmental Trends: Population, Urbanization, Poverty and Inequality Occupational Hazards and Health Risks;Nutritional Status of Children and Women
-
- Exposure and Health Risks:Air and Water Pollution, Household and Municipal Waste.

2.6 SHGEO/604/DSE-4: Geography of Health and Wellbeing

Concepts in Theory

Unit-1:Perspectives on Health

1. උමුවෙන් එක උමුවෙන් තැබෙන සංඛ්‍යාත ඉගින්චියෙන්
Definition and Concept of the term Health,
2. උමුවෙන් මෝදේ එක උමුවෙන්; උමුවෙන් තැබෙන සංඛ්‍යාත එක උමුවෙන් පෙන්වන නො
Introducing Medical Geography; Its Scope and Contents
3. උමුවෙන් මෝදේ තැබෙන සංඛ්‍යාත; උමුවෙන් එක උමුවෙන් තැබෙන
ලේ.ජේ.ඩී, ත්‍යාමා, උමුවෙන් මෝදේ, උමුවෙන් මෝදේ. එක උමුවෙන් පෙන්වන නො
Applications of Medical Geography; Linkage between Health and Society, Taboo, Environment, Development, Education and Awareness
4. උමුවෙන් එක උමුවෙන් මෝදේ තැබෙන සංඛ්‍යාත පෙන්වන නො
උමුවෙන් මෝදේ, උමුවෙන් මෝදේ. එක උමුවෙන් මෝදේ
Health and Environmental Trends: Population, Urbanization, Poverty and Inequality

Unit-2:Health Risks and Diseases

1. පෙන්වන මෝදේ එක උමුවෙන් මෝදේ; යම් එක ඉහළ සාක්ෂි තැබෙන එක
පෙන්වන නොකළ තැබෙන නො.එකුව
Exposure and Health Risks:Air and Water Pollution, Household and Municipal Waste
2. පෙන්වන මෝදේ සාක්ෂි එක උමුවෙන් මෝදේ; මෝදේ. තැබෙන සාක්ෂි
තැබෙන මෝදේ එක එක යම් තැබෙන නො
Occupational Hazards and Health Risks;Nutritional Status of Children and Women
3. පෙන්වන නො: යන්.ගැඹු එක පෙන්වන නො; මෝදේ. මෝදේ. එක පෙන්වන නො
Diseases:Types and Distribution; Geographical Factors
4. පෙන්වන නො: පෙන්වන නො; පෙන්වන නො; එක පෙන්වන නො; එක පෙන්වන නො
යම්.එකුව එක නොකළ නො. එක පෙන්වන නො

Tropical Diseases: Malaria and Dengue-Epidemiological Character and Regional Distribution

Unit-3:Climatic Change and Human Health

- 1 .သမဂ္ဂ ပရောဂျာ နည်စွမ်း ပေါ် အကြောင်း ပေါ် ပေါ်မှတ်မှတ် ၀၂ ဒုက္ခ ၁၇.၃၇
ပုံမှန်ရောဂါး-ဖူးဆီ ဝိသနား၊ ပရောဂျာ၊ ဒုက္ခ ၁၇.၃၇
Effects of Climate Change on Weather Elements-Solar Radiation, Temperature, Rainfall
- 2 .ဖူးဆီ နှစ်လာ ဝိသနား အန ပေါ် ပုံမှန်ရောဂါး ၀၂ ဇန်နဝါရီ ၉၅ ပုံမှန်ရောဂါး ၀၂ ဇန်နဝါရီ ၉၅
Solar Ultraviolet Radiation and Related Health Hazards
- 3 .ဒုက္ခ ၁၇.၃၇ ပုံမှန်ရောဂါး အန ပုံမှန်ရောဂါး ၁၀၂၆ လိပ်ငွေရောဂါး ၆၀၀၈ ပုံမှန်ရောဂါး ၁၀၂၆
Climate Change and Ecological Transformation
- 4 .ပုံမှန်ရောဂါး အသေချာအသေချာ အန ဒုက္ခ ၁၇.၃၇ ပုံမှန်ရောဂါး ၁၇၁၂ ပုံမှန်ရောဂါး ၁၇၁၂
Human Adaptation and Adjustment to Climate Change

Reference Books

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- AvonJoanL.andJonathanAPatzed.2001: EcosystemChanges andPublicHealth,Baltimin,JohnHoplingUnitPress(Ed).
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- HardhamT.andTannavM.,(Eds):UrbanHealthinDevelopingCountries;Progress,Projects,Earthgoan,London.
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- Phillips,D.andVerhasselt,Y.,1994:HealthandDevelopment,Routledge,London.
- Tromp, S., 1980: Biometeorology: The Impact of Weather and Climate on HumansandtheirEnvironment,HeydonandSon.

3.Skill Enhancement Subjects Syllabus

COURSERE TITLE: Computer Basics and Applications (MARKS-50)

COURSE CODE: SHGEO/101/C-1

CREDIT-2

Course Objectives and Course Outcome:

The course is designed to get a comprehensive knowledge of fundamentals of computer application. It also includes the exercise from Microsoft excel and SPSS regarding the basic statistical computation. The course, therefore, lay the foundation for software-based computing skills. Upon completion, the students get adequate level of skills to do statistical analysis.

3.1 SHGEO/305/SEC-1: Computer Basics and Applications

Concepts in Theory

1. වැඩත්මත්, තුනයින්ම, අන් උපාක්ෂණික තොගයට: බැවත් වැඩත්මත්, පැවත්, පැවත්මෙන්ම, පමණ, එහෙතුම් මාරුණිකීම, පමණිකීම, පමණිකීම ස.ංජ්‍යනියා, එස්ප්‍රෝට්, ට්‍රේක්ස්ජ්‍රැස්ලිස්; තොක්ස්ජ්‍රැස්ලිස් මුද්‍රණජ්‍රැස්ලිස්, තොක්ස්ජ්‍රැස්ලිස්ලිස් අන් බැංක්ස්ලිස්; රුන්යිජන්මාන්ම ප්‍රතිඵලිත අන් බැංක්ස්ලිස්

Computation, Storing and Formatting Spreadsheets: Computation of Rank, Mean, Median, Mode, Standard Deviation, Moving Averages, Sample Variation; Derivation of Correlation, Covariance and regression; Selection of technique and interpretation.

2. ස.ංජ්‍යන් මාරුණිකීම තොගය: එබු.නිජ්‍යන් මාරුණිකීම අන් වැඩැත්තුවෙනුප; රුන්යිජන්මාන්ම ප්‍රතිඵලිත නිෂ්පාදන අන් මාරුණිකීම තොගය මූල්‍ය මිශ්‍රණය

Preparation of Annotated Diagrams: Scatter diagram and Histogram; selection of technique and interpretation of diagrams

3. පැවත්තාත්මක තොගයින්: 00000 නිශ්චිත බැංක්ස්ලිස්ලිස් අන් ස.ංජ්‍යන්මාන්ම තොගයින් අන් මාරුණිකීම තොගයින්

Internet Surfing: generation and extraction of information. Cloud computing and drive sharing.

ReferenceBooks

- Bartee,ThomasC.(1977):Digital ComputerFundamental;McGrawHill.
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Sarkar,A.andGupta,S.K(2002)ElementsofcomputerScience,SChandandCompany,
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COURSRE TITLE:Geographical Information System and GPS(MARKS-50)

COURSE CODE: SHGEO/101/C-1

CREDIT-2

Course Objectives and Course Outcome:

- Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes.
- Interpret satellite imagery and understand the preparation of false color composites from them.
- Training in the use Geographic Information System (GIS) software for contemporary mapping skills.
- Analyzing and interpreting remotely sensed satellite images and aerial photographs in order to understand topographical and cultural variations on the Earth's surface.
- Conducting field excursions and preparation of field report on research on problem in different areas of India
- Apply GIS to the preparation of thematic maps.
- Use GNSS.

3.2 SHGEO/405/SEC-1:Geographical Information System and GPS

Unit-1: Geographical Information System

1 G.I.S: උනුදහන්වල ඉඩන්වලන නෑ

G.I.S: Basic Concepts

2. GIS තුළ තෙක්නොල නෑ

Components of GIS

3. GIS පෙෂේන්බෝර තුළ තොට්ටු.ව

Development of GIS Technology

4.GIS චක්‍රයන්: තෙලැගත් තුළ රැස්ටර්.ඩෙක්ස්

GIS Data structure: Raster and Vector

Unit-2: Global Positioning System

1.ශාක්‍රන්වනවල ඉඩන්වලන්: : GPS තුළ GNSS Segments, PRN Code, Waypoints තුළ Tracks

Basic Concept: GPS and GNSS, Segments, PRN Code, Waypoints and Tracks

2.වුද්ධිමාන පෙළපෙළ: Open තුළ Closed Traverse

Distance Calculation, Open and Closed Traverse.

3. Microsoft Excel තුළ Plotting

Plotting in Microsoft Excel

4. Software භූමි ග්‍රෑස් දැනුම් තුළ mapping

GPS data downloading in software and mapping.

Unit 3: Mapping in GIS

1.Geo-referencing, Digitization

2 .ග්‍රෑස් චක්‍රයන් නෑ මුදලනු තුළ මුදලන්

Attribute data creation and uses

3.මුදලනු තෙක්නොල

Map Composition

4.Layout

References

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- WilleyandSonsInc.,newYork,198p

4.Generic Elective Subjects Syllabus

COURSE TITLE:Physical Basis of Earth (MARKS-50)

COURSE CODE:SHGEO/304/GE-1

CREDIT-6

Course Objectives and Course Outcome:

1. Understand the theories and fundamental concepts of Geotectonic and Geomorphology. Understand earth's tectonic and structural evolution. Gain knowledge about earth's interior. Develop an idea about concept of plate tectonics, and resultant landforms.
- 2.Acquire knowledge about types of folds and faults and earthquakes, volcanoes and associated landforms.
- 3' Understanding crustal mobility and tectonics; with special emphasis on their role in landform development.
- 3.Overview and critical appraisal of landform development models.
- 4.Ablity to record temperature, pressure, humidity and rainfall
- 5.Develop the skills of identification of features and correlation between them.
- 6.Do field surveys using appropriate techniques. Identification of rocks and minerals.

4.1SHGEO/304/GE-1:Physical Basis of Earth

Unit1:Earth:Origin and Evolution

1. (Origin of Universe(Big BangModel),(Origin of Earth(Nebular Hypothesis of Laplace)
ଓଡ଼ିଆ ପାଇଁ କାହାର କାମ କରିବାକୁ ଜାଣନ୍ତୁ କିମ୍ବା କିମ୍ବା କିମ୍ବା
କିମ୍ବା କିମ୍ବା କିମ୍ବା)
- 2.Geological Time Scale and Geological History of the Earth
ପରିମାଣରେ କାହାର କାମ କରିବାକୁ ଜାଣନ୍ତୁ କିମ୍ବା କିମ୍ବା
- 3.Isostasy:Origin of the concept/Theories of Airy and Pratt, Isostatic Adjustments, Gravity Anomalies
କାହାର କାମ କରିବାକୁ ଜାଣନ୍ତୁ କିମ୍ବା କିମ୍ବା କିମ୍ବା
- 4.Internal Structure of the Earth:Seismological Evidences, Physical, chemical and seismic properties of Earth layers.
କାହାର କାମ କରିବାକୁ ଜାଣନ୍ତୁ କିମ୍ବା କିମ୍ବା

Unit2:Tectonic Theories and Processes

1.Continental Drift Theory of Alfred Wegener

ଆମ୍ବାଦିନରେ ପରିଚୟ କରିବାର ପରିବହନ କରିବାର କାମ କରିବାର କାମ କରିବାର କାମ କରିବାର

2.Palaeo-magnetism and Sea Floor Spreading

ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର କାମ କରିବାର

3.Plate Tectonic Theory; Plate Composition, Plate Movement, Plate Margins, Triple Junctions.

ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର କାମ କରିବାର
କାମ କରିବାର, କାମ କରିବାର କାମ କରିବାର

4.Tectonic Processes in relation to Plate Tectonics; Orogenesis, Earthquake, Vulcanicity

ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର କାମ କରିବାର;
ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର

Unit3:Process Geomorphology

1.Evolution of landforms on Unicinal, Folded and Faulted Strata

ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର କାମ କରିବାର
କାମ କରିବାର କାମ କରିବାର

2.Landscape Evolution Models:Davis,Penck and Hack

ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର କାମ କରିବାର

3.Climatic Geomorphology: Basic concepts,

ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର କାମ କରିବାର

4.Hillslopes:Genesis and Morphology

ପାରୋମେଗନ୍ଟିମ୍ ଏବଂ ମରାଫ୍‌ସ୍ପ୍ରେଡ଼ିଙ୍ କାମ କରିବାର

Reference Books

- Bloom A.L., 2001: Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi.
 - Bridges E.M., 1990: World Geomorphology, Cambridge University Press, Cambridge.
 - Christopherson, Robert W., (2011), Geosystems: An Introduction to Physical Geography, 8 Ed., Macmillan Publishing Company
 - Kale V.S. and Gupta A., 2001: Introduction to Geomorphology, Orient Longman, Hyderabad.
 - Knighton A.D., 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London.
 - Selby, M.J., (2005), Earth's Changing Surface, Indian Edition, OUP
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- Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to Physical Geology, 4th Edition, John Wiley and Sons

- Thornbury W.D., 1969: Principles of Geomorphology, Wiley.

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COURSE TITLE: Human Geography (MARKS-50)

COURSE CODE: SHGEO/404/GE-2

CREDIT-6

Course Objectives and Course Outcome:

1. Gain knowledge about major themes of human Geography.
2. Acquire knowledge on the history and evolution of humans.
3. Understand the approaches and processes of Human Geography as well as the diverse patterns of habitat and adaptations.
4. Develop an idea about space and society

4.2 HGEO/404/GE-2: Human Geography

Unit 1: Nature and Principles

1. പ്രാഥമിക അവശ്യങ്ങൾ അവ ദർശാന്ത ക്ഷേര പ്രാഥമിക, പാലഭ്യം തുടർന്നു അവ നാട്യജില്ല ബഹു

Nature and scope and recent trends. Elements of Human Geography

2. പാലഭ്യം തുടർന്നു ഉള്ളായാണ് വ്യാപക ഉദ്ദേശ്യ ഉണ്ടാക്കാൻ ചെയ്തു; മുൻപുള്ളി, മുൻപുള്ളി, മുൻപുള്ളി, മുൻപുള്ളി, മുൻപുള്ളി.

Approaches to the study of Human Geography; Resource, Locational, Landscape, Environmental

3. പാലഭ്യം അംഗീകാരപ്പെട്ട്, ഏ.ഓ. അവ റാഷ.ഓ. ലഭ്യമായാണ് ഉണ്ടാവുന്നത്
Evolution of Humans. Concept of Race and Ethnicity

4. പ്രാഥമിക, മുൻപുള്ളി അവ ദർശാന്ത ഗാന്ധി ബഹു (പാഠ.ശാഖ അവ ഉണ്ടാവുന്നത്)
Space, Society and Cultural regions (language and religion)

Unit 2: Society, Demography

1. ප්‍රභුත්‍යාලන උණුම් තුළමන්ගේ මැගිවරීම්: උස්සුවෙන එක නෘත්‍ය තුළමන්, නෘත්‍ය ප්‍රාග්ධන නැගැබුණු ඇතුළත්. එහි මූලික ආකෘති, නෘත්‍ය තුළමන් ප්‍රාග්ධන නැගැබුණු ඇතුළත්

Evolution of Human societies: Hunting and food gathering, pastoral nomadism, subsistence farming, industrial and urban societies

2. යමු ලිංගෝධිත මූලික එක ප්‍රාග්ධන මෘදුකාංග ඉගැල්ප එක ඉඩන්. නො ප්‍රාග්ධන නැගැබුණු

Population growth and distribution in India and world

3. මෘදුකාංග ඉගැල්ප යමු ලිංගෝධිත තුළමන් ප්‍රාග්ධනය

Population composition in India

4. මුදු.පු තෙක්නොලඣිංග තුළමන් ප්‍රාග්ධනය

Demographic Transition model

Unit 3: Ekistics

1. මෘදුකාංග ඉගැල්ප බැහැර ඇති ගොන්. එන් එක උධ්‍යාත්මක

Rural Settlement pattern in India

2. මෘදුකාංග ඉගැල්ප බැහැර ඇති එකඟ නැගැබුණු මූලික ප්‍රාග්ධනය

Rural house types in India

3. මෘදුකාංග ඉගැල්ප බැහැර ඇති උධ්‍යාත්මක ගොන්. එන් එක යොලුන් ප්‍රාග්ධනය

Hierarchy of Urban Settlements in India

4. මෘදුකාංග ඉගැල්ප බැහැර ඇති උධ්‍යාත්මක ප්‍රාග්ධනය

Pattern of Urbanization housing in India

Reference Books

- Bergman,E.F(1995):Human Geography-
Culture,Connections and Landscape,Prentice Hall,New Jersey
- Chisholm.(1975):Human Geography,Penguin Books,Hermondsworth.
- Daniel,P.A.and Hopkinson,M.F.(1989)The Geography of Settlement,Oliver & Boyd,London.
- Johnston R;Gregory D,Pratt G. et al.(2008)The Dictionary of Human Geography,Blackwell Publishing
- on.
- Jordan-Bychkov et al.(2006)The Human Mosaic:A Thematic Introduction to
Cultural Geography.W.H.Freeman and Company,New York.

Pearce D.(1995):Tourism Today: A Geographical Analysis, 2nd edition, Longman

Scientific & Technical, London

Pickering K. and Owen A. A. (1997): An Introduction to Global Environmental Issues, 2nd edition Rutledge, London.

Raw, M. (1986): Understanding Human Geography: A Practical Approach, Bell and Hyman, London

Rubenstein, J. M. (2002), The Cultural Landscape, 7th edition, Prentice Hall, Englewood Cliffs

Smith D. M. (1982): Human Geography: A Welfare Approach, Edward Arnold, London

- Norton, W. (2001): Human Geography, 4th Edition Oxford University Press, Oxford

COURSE TITLE: : Maps and Diagrams MARKS-50)

COURSE CODE: SHGEO/203/GE-3

CREDIT-4

Course Objectives and Course Outcome:

1. Comprehend the concept of scales and representation of data through cartograms.
2. Interpret geological and weather maps.
3. Learn the usages of survey instruments.
4. Brings direct interaction of different types of surveying instruments like Dumpy level and Theodolite with environment.
5. Develop an idea about different types of thematic mapping techniques

4.3 SHGEO/203/GE-3:Maps and Diagrams

Unit-1: Scale and Cartograms

1. രാഖരണ അ ബഹുമാനത്താർ (ശ്രദ്ധ) കുറപ നോക്കു

Construction of Linear and Comparative (Unit)

2. സംഗ്രഹണ പദ്ധതി, റിജിസ്ട്രേഷൻ അ വിവര നോക്കു

Cartograms: Circle, Square and Pie Graph

3. ആസെ-ഡെപെൻഡൻസ് പാസിഫിക്, ഫാസിഫിക് പാസിഫിക്

Age-Sex Pyramid, Dependency Ratio

4. യോ ലഭ്യേശ്വര പശ്ച അ ഫിലിപ്പൈ പദ്ധതി: യോ ലഭ്യേശ്വര ഉഥ. നിൽ. നാട്യോദയ ദിവ്യാ ഓ

ଡିପ୍ଲାମ୍ବାଟ୍ସିପ୍ରେସ୍, ଫିଲ୍ଡ ଅନ୍ତର୍ଜାଲୀଙ୍କ ପାଠ୍ୟାବଳୀ ଓ ଯଦୀକରଣାବଳୀ ଉପରେ
Population Maps and Diagrams: Population Density by Choropleth, Distribution by Dot and Sphere

Unit-2: Map Projections

1. ପାଠ୍ୟ ପାଠ୍ୟାବଳୀରେ: ପାଠ୍ୟାବଳୀ ଅନ୍ତର୍ଜାଲୀ ଏବଂ ଯଦୀକରଣାବଳୀ

Map Projections: Nature and Classification

2. ରାଶିଧିତାତଥାବଳୀ ପାଠ୍ୟ ପାଠ୍ୟାବଳୀରେ ବିଭିନ୍ନ ପାଠ୍ୟ ବର୍ଷ, ୦୩୦୦୭ ବର୍ଷ, ଶୈଖିକୀୟ ଅନ୍ତର୍ଜାଲୀ ବର୍ଷ: Simple Conical with one standard parallel, Cylindrical Equal Area, Polar Zenithal Stereographic

Principles, Theories, Construction and Properties of select Map Projections: Simple Conical with one standard parallel, Cylindrical Equal Area, Polar Zenithal Stereographic

Unit-3: Surveying

1. କ୍ଷଣିକାବଳୀ ଅନ୍ତର୍ଜାଲୀ ବର୍ଷ: Angles, Bearing and Azimuths, Traversing, Radiation, Intersection Concepts and Principles: Angles, Bearing and Azimuths, Traversing, Radiation, Intersection

2. ପରିମାଣାବଳୀ ବର୍ଷରେ: କ୍ଷଣିକା ପରିମାଣାବଳୀ ପାଠ୍ୟ ପରିମାଣାବଳୀ open ଅନ୍ତର୍ଜାଲୀ closed traverse ପରିମାଣାବଳୀ ବର୍ଷ: ବର୍ଷରେ ପରିମାଣାବଳୀ ଅନ୍ତର୍ଜାଲୀ କ୍ଷଣିକା ପରିମାଣାବଳୀ— Included Angle, Area of Traverse

Prismatic Compass: Preparation of land use maps by open and closed traverse; computations of compass traverse- Included Angle, Area of Traverse

3. ମହାପରିମାଣାବଳୀ ପରିମାଣାବଳୀ—ପରିମାଣାବଳୀ ଅନ୍ତର୍ଜାଲୀ Levelling by Dumpy Level: Profile

Unit-4: Field Report

Each student will prepare an individual report based on primary data collected from field survey and secondary data collected from different sources for either a rural area (mouza) or an urban area (municipal ward) based on cadastral or municipal maps to study specific problems.

The duration of the field work shall not exceed 3 days

Report should be hand written with the following Tentative Chapter Schemes:

Preface & Acknowledgement

Introduction: Objective, Extent and Space Relations, Data sources and Methodology

Physical Environment: Lithology, Drainage, Slope, Climate, Soil, Vegetation etc. Socio Economic Environment: Population Characteristics, Occupational Structure, Ethnic and Religions Composition, Per-Capita Income, any other aspects.

Problems and Prospects Bibliography if any

Appendix: Survey Questionnaire(s), Additional Tables if any Word Limit: 3000 (Excluding Tables and Appendix).

5. A copy of the bound report, duly signed by the concerned teacher, should be submitted

Reference Books

- Anson R. and Ormeling F.J., 1994: International Cartographic Association: Basic Cartographic Vol.P regmen Press.
- Gupta K.K. and Tyagi, V.C., 1992: Working with Map, Survey of India, DST, New Delhi.

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- MonkhouseF.J.and WilkinsonH.R.,1973:Maps and Diagrams,Methuen,London.
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- SinghR.L.and SinghR.P.B.,1999:Elements of Practical Geography,Kalyani Publishers.
- Sarkar,A.(2015)Practical geography:A systematic approach.Orient Black Swan Private Ltd.,New Delhi

COURSE TITLE: Economic Geography (MARKS-50)

COURSE CODE: SHGEO/404/GE-4:
CREDIT-6

Course Objectives and Course Outcome

:

2. Understand the concept of economic activity, factors affecting location of economic activity. Gain knowledge about different types of Economic activities
3. Assess the significance of Economic Geography, the concept of economic man and theories of choice.
4. Analyze the factors of location of agriculture and industries.
5. Understand the evolution of varied types of economic activities.
6. Map and interpret data on production, economic indices, transport network and flows.

4.4 SHGEO/404/GE-4:Economic Geography

Unit 1: Development of Agriculture

1. ଲଭ୍ୟତା ଥିବା ପାଇଁ କାମରୁକ୍ତ ଉଦ୍ଦେଶ୍ୟ ଓ ଧରନିଗଠନ

Definition and concept of Agriculture

2. ପାଇଁ କାମରୁକ୍ତ (ପିଣ୍ଡରୁକ୍ତ ନାଗନୀତିକ କାମରୁକ୍ତ ଉଦ୍ଦେଶ୍ୟ ଓ କାମରୁକ୍ତ ପାଇଁ କାମରୁକ୍ତ ପାଇଁ କାମରୁକ୍ତ)

Agricultural System (Intensive subsistence and Extensive Commercial)

3. ପାଇଁ କାମରୁକ୍ତ ଉଦ୍ଦେଶ୍ୟ ଓ କାମରୁକ୍ତ

Commercial dairy farming

4. ഫോണും തോട്ടും അല്ലെങ്കിൽ വൺ തുനൻ മോഡൽ: Von Thunen Model

Model in Agricultural Geography: Von Thunen Model

Unit 2: Industrial Development

1. നികുതിയും ഉപയോഗാവലും ബോർഡ്; ക്രമീകരിക്കുന്ന പ്രവാഹങ്ങൾ എന്നാൽ വിവരങ്ങൾ വിവരങ്ങൾ വിവരങ്ങൾ വിവരങ്ങൾ

Location Factors; Role of transport in industrial location

2. ക്രമീകരിക്കുന്ന നികുതിയും അല്ലെങ്കിൽ വൺ തുനൻ മോഡൽ: Weber & Losch
Models of Industrial Location: Weber & Losch

3. ക്രമീകരിക്കുന്ന നികുതിയും അല്ലെങ്കിൽ വൺ തുനൻ മോഡൽ: agglomeration അല്ലെങ്കിൽ deagglomeration
Industrial agglomeration and deagglomeration

4. ക്രമീകരിക്കുന്ന നികുതിയും അല്ലെങ്കിൽ വൺ തുനൻ മോഡൽ: Asansol-Durgapur, Haldia

Industrial Regions: Asansol-Durgapur, Haldia

Unit 3: Transportation & International organization

1. പ്രസ്താവിക്കുന്ന സ്ഥലം: Accessibility അല്ലെങ്കിൽ Connectivity

Transport Network: Accessibility and Connectivity

2. മുഖ്യമായി ഉപയോഗിക്കുന്ന വിവരങ്ങൾ വിവരങ്ങൾ വിവരങ്ങൾ (Railway and National High ways)

Major transport system in India (Railway and National High ways)

3. മുഖ്യമായി ഉപയോഗിക്കുന്ന വിവരങ്ങൾ വിവരങ്ങൾ WTO, EEC, SAARC

Role of WTO, EEC, SAARC in International Trade

4. മുഖ്യമായി വിവരങ്ങൾ വിവരങ്ങൾ വിവരങ്ങൾ

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