COURSESOFSTUDIES

FOR

THREE YEAR DEGREE

COURSEIN

ARTS HONOURS

DEPARTMENTOFGEOGRAPHY

Choice Based Credit System (CBCS)

First & Second Semester Examination – 2023-24

Third & Fourth Semester Examination –2024-25

Fifth & Sixth Semester Examination–2025-26

GOVERNMENTAUTONOMOUSCOLLEGE,PHULBANI,KANDHAMAL

DISTRIBUTION OF MARKS

Paper with Practical	
Mid Sem (15Marks)	
Two questions to be answered carrying 1mark each	2X1mark =2marks
Two questions to beansweredcarrying1.5marks each	2X1.5 marks= 3marks
Two questions to be answered carrying 2markseach	2X2 marks=4marks
One questiontobeansweredcarrying6markseach	1X6marks= 6marks
End Sem (60Marks)	
Eight questions to be answered carrying 1markeach	8X1mark =8marks
Eightquestionstobeansweredcarrying1.5markseach	8X1.5marks=12marks
Eightquestionstobeansweredcarrying2markseach	8X2marks=16marks
Fourquestionstobeansweredcarrying6markseach	4X6marks=24marks
Paper without Practical	
Mid Sem (20Marks)	
Three questions to be answeredcarrying1markeach	3X1 mark =3marks
Two questions to be answered carrying 2markseach	2X2 marks=4marks
Two questions to be answered carrying 3markseach	2X3 marks=6marks
One questiontobeansweredcarrying7markseach	1X7marks= 7marks
End Sem (80Marks)	
Twelve questions to be answered carrying 1markeach	12X1 mark=12marks
Eightquestionstobeansweredcarrying2markseach	8X2marks=16marks
Eightquestionstobeansweredcarrying3markseach	8X3marks=24marks
Fourquestionstobeansweredcarrying7markseach	4X7marks=28marks

SYLLABI FORCBCS COURSE

Sem	CORECOURESE(14)	AbilityEnhancementCompulsoryCourse (AECC)(2)	AbilityEnhancementElectiveCourse(AEEC)(2) (Skill Based)	Elective:DisciplineSpecific DSE(4)	Elective: Generic(GE) (4)
I	CORE-I	AECC-IAECC-III(EV-I)			GE-IA
	CORE-II				
II	CORE-III	AECC-IIAECC-III(EV-II)			GE-1B
	CORE -IV				
III	CORE-V	AECC-III(EV-III)	SEC-I		GE-2A
	CORE-VI				
	CORE-VII				
IV	CORE-VIII	AECC-III(EV-IV)	SEC-II		GE-2B
	CORE-IX				
	CORE-X				
V	CORE-XI	AECC-III(EV-V)		DSE-I	
	CORE-XII			DSE-II	
VI	CORE-XIII	AECC-III(EV-VI)		DSE-III	
	CORE-XIV			DSE-IV /Project	

YEAR&SEMESTER-WISEPAPERS&CREDITSATA GLANCE

Three-Year(6-Semester)CBCSProgramme(B.A.Hons)(GeographyDepartment)				
Yr.	Sl.No.	Course Structure	Code	Credit Points
FIRSTYEAR		**SEMESTER-I**		
	1	Geomorphology	C-1.1	4+2
	2	Cartography	C-1.2	4+2
	3			
	4			
	5	Ethics&Values(Unit-I)	AECC-1.5	1
		SEMESTER-II		
	6	Human Geography	C-2.1	4+2
	7	Climatology	C-2.2	4+2
	8	Geography ofIndia	GE-2.3	4+2
	9	EVS(ForCommerce)	AECC-2.4	4
	10	Ethics&Values(Unit-II)	AECC-2.5	1
SECONDYEAR		**SEMESTER-III**		
	11	Oceanography	C-3.1	4+2
	12	StatisticalMethodsin Geography	C-3.2	4+2
	13	Geography ofOdisha	C-3.3	4+2
	14			
	15			
	16	Ethics&Values(Unit-III)	AECC-3.6	1
		SEMESTER-IV		
	17	EvolutionofGeographicalThought	C-4.1	4+2
	18	EconomicGeography	C-4.2	4+2
	19	EnvironmentalGeography	C-4.3	4+2
	20	Human Geography	GE-4.4	4+2
	21			
	22	Ethics& Values(Unit-IV)	AECC-4.6	1
FINALYEAR		**SEMESTER-V**		
	23	RegionalPlanningand Development	C-5.1	4+2
	24	Remote Sensing&GIS	C-5.2	4+2
	25	Population Geography	DSE-5.3	4+2
	26	ResourceGeography	DSE-5.4	4+2
	27	Ethics&Values(Unit-V)	AECC-5.5	1
		SEMESTER-VI		
	28	Geography ofIndia	C-6.1	4+2
	29	DisasterManagement	C-6.2	4+2
	30	Urban Geography	DSE-6.3	4+2
	31	ProjectWork /Field Work andResearch Methodology	DSE-6.4	6 / 4+2
	32	Ethics& Values(Unit-VI)	AECC-6.5	1

Notes:

- C- Core Course
- GE-GenericElectiveCourse
- DSE- DisciplineSpecificElectiveCourse
- AECC-AbilityEnhancementCompulsoryCourse
- SECC-SkillEnhancementCompulsoryCourse(SkillBased)
- Fora6 credit course, thetotalteachinghoursare:Minimum-50 Hours,Maximum-65 Hours

PROGRAMME OUT COMES (POs)

After completion of the Bachelor Degree in Geography, the course is geared to cater the following objectives:

PO1: Students will understand the patio-temporal interactions of the physical, human and environmental components, which are often complex and dynamic.

PO2: Students will learn socio-cultural, political, economic and physical characteristics at global, regional and local level.

PO3: Students will be enhanced with skill and application in various disciplinary theories, methodologies

PO4: Students will develop their analytical and critical thinking that leads to develop their scientific attitude..

PO5: Students will be ensured that the geographical knowledge is essential and it is self-directed.

PROGRAMME SPECIFIC OUT COMES (PSOs)

Programme specific Outcomes of the Bachelor Degree in Geography are:

PSO1: Develop the leadership attitude to work both as an individual and also in team in identifying problems and challenges, and find out possible solutions.

PSO2: In the field surveys, students are exposed to a detailed understanding of socio- economic, geo-economic and cultural dimensions of the people.

PSO3: Students are trained in handling modern computer based technologies such as RS and GIS, so that they can apply their knowledge.

PSO4: Students' development courses and research shall develop the ability of the students' to analyze and develop the critical thinking.

PSO5: The syllabus is oriented towards job opportunities and future prospects for the students, through which, the students can be guided to various competitive exams like NET-JRF, Civil service exams.

SEMESTER-I

C-1.1: GEOMORPHOLOGY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. To provide knowledge on the processes going on the surface of the Earth.
2. To enable students for analytical thinking on Geomorphology

Course Outcome

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

THEORY

UNIT- I:

Geomorphology: Meaning, Nature & Scope, Internal Structure of the Earth, Isostasy (Airy and Pratt's view), TypesofFoldsandFaults

UNIT-II:

Earth Movements: Continental Drift, Plate Tectonics, Types of Folds and Faults, Earthquakes and Volcanoes(Types,distributionandassociatedLandforms).GeosynclinaltheoryandstagesofmountainbuildingandConvection currenttheory

UNIT-III:

Geomorphic Processes: Types & characteristics of Weathering & Mass Wasting, Cycle of Erosion & evolution ofLandformsofDavisandPenck'sevolutionarytheory)

UNIT-IV:

Geomorphicagentsandlandforms:(Erosionaland DepositionallandformsofFluvial,Karst, Aeolian, Glacial)

PRACTICAL

1. Drawingofrelieffeaturesusingcontourlines-Mountain,Plateau,valleys,escarpmentsandtheirprofiles,construction anduseofserial,projectedandsuper-imposedprofiles,
2. UseofPlanimeterandRotameterinmeasurementsonmaps,Longitudinalandtransverseprofileofariver,Drainage PatternanddrainageDensity
3. InterpretationofsimplegeologicalMaps(IntroducingtheconceptsofDip,Strike,BeddingPlane,Unconformity, Dykes,FoldsandFaults).
4. PracticalRecord and Viva-voce(10marks)

TextBooks:

1. Singh,S(2009):PhysicalGeography,Geomorphology, PrayagPustak Publications,Allahabad

ReadingLists:

- BloomA.L.,2003:Geomorphology:ASystematicAnalysisofLateCenozoicLandforms,Prentice-HallofIndia,NewDelhi.
- BridgesE. M., 1990:World Geomorphology,CambridgeUniversity Press,Cambridge.
- Christopherson,RobertW.,(2011),Geosystems:AnIntroductiontoPhysicalGeography,8Ed.,MacmillanPublishingCompany
- Kale V.S. andGupta A.,2001: IntroductiontoGeomorphology,OrientLongman,Hyderabad.
- Knighton A.D.,1984:FluvialFormsand Processes, EdwardArnold Publishers,London.
- RichardsK.S., 1982:Rivers:FormandProcessesin Alluvial Channels, Methuen, London.
- Selby,M.J.,(2005), Earth'sChanging Surface,IndianEdition,OUP
- Skinner,BrianJ.andStephenC.Porter(2000),TheDynamicEarth:AnIntroductiontophysicalGeology,4thEdition, John Wiley and Sons
- Thornbury W.D.,1968:PrinciplesofGeomorphology,Wiley.
- Gautam, A(2010):BhautikBhugol,Rastogi Publications,Meerut
- Tikkaa,RN(1989):BhautikBhugolkaSwaroop, KedarnathRam Nath,Meerut
- Singh,S(2009):Geomorphology,PrayagPustakBhawan,Allahabad.
- Steers, J.A.–Unstable Earth,KalyaniPublisher.

C-1.2: CARTOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. Involve students with practical understanding on cartography

Course Outcome

1. Read and prepare maps.
2. Comprehend locational and spatial aspect so the earth surface use and importance of maps for regional development and decision making**.**

THEORY

UNIT- I: Cartography-Natureandscope

i. Needsof map making, characteristicsof maps,
ii. Cartographyasascienceofhuman communication
iii. BranchesofCartography,Scopeofcartography

UNIT- II: Basic Geodesy,Scale – Concept andapplication

i. SphericalEarth, EllipsoidalEarth. GeoidEarth
ii. GeographicalCoordinates(Latitudeand Longitude), Graticules
iii. Scale,Construction oftypesof Scales(Plain, Comparative andDiagonalScale)

UNIT- III:MapProjections

i. Meaningand Use,Brief Historicalaspect.
ii. Transformationofarea, Distanceand Direction
iii. Simple CylindricalProjection,ConicalProjection with onestandardprojection

UNIT- IV: SlopeAnalysisand GeologicalMapGradient andslope

i. Interpretationof Bedding plane,Strike,Dip, structure&stratigraphyof Geologicalmap.
ii. Slopedefinedandmethodsofdeterminationofslope(Wentworth'smethodandSmith)

PRACTICAL

1. Constructionanduse ofGraphical, RF& StatementScale, DiagonalScale
2. Grid ReferenceSystem, Latitude, Longitude,InternationalDateLine,Dateand Timebasedon GMT &IST)
3. ConstructionofMapProjections:SimpleCylindrical,SimpleconicalProjectionwithoneandtwostandardparallels, Polyconic,GnomonicandMercator's
4. Cartogramsofone,twoandthreedimensions– SimpleandComplexbars,circleandspherediagram,blockdiagrams.
5. Drawingof Choropleth and Isoplethsmaps, relief and slopemaps
6. Practicalrecord and viva-voce

TextBooks:

1. SinghR. L. andSingh R.P.B., 1999:Elementsof PracticalGeography,KalyaniPublishers.
2. Mishra R.P. and Ramesh, A.,1989:Fundamentalsof Cartography,Concept, NewDelhi.

ReferenceBooks:

❖ AnsonR.andOrmellingF.J.,1994:InternationalCartographicAssociation:BasicCartographicVol.PregmenPress.
❖ Monkhouse F. J.andWilkinson H. R., 1973:Mapsand Diagrams,Methuen,London.
❖ Robinson A. H.,2009:Elementsof Cartography,JohnWileyandSons,NewYork.
Sarkar,A.(2015)Practicalgeography: Asystematic approach.OrientBlack Swan PrivateLtd.,NewDelhi.

SEMESTER-II

C-2.1:HUMANGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. To recognize various aspects of human life and interrelation with geography.

Course Outcome

1. Know the changing human and cultural land scape at different levels.
2. Understand patterns and processes of population growth and its implications.
3. Appreciate the nature and quality of human Landscapes

THEORY

UNIT- I:
Introduction: Defining Human Geography: Nature, scope and ContemporaryRelevance,Man-natureRelationship
UNIT-II:
World distribution ofmajorracialgroups, languageandreligion,Cultural realmsoftheworld
UNIT-III:
Demographic Characteristics of population: Population Composition (Male & Female, Sex Ratio, Age and Sex,Population Density), Factor affecting population distribution, Trend of World Population Growth, DemographicTransition Theory,PopulationProblemsindevelopedandunderdevelopedworld.
UNIT-IV:
Settlements:TypesandpatternofRuralandurbanSettlements;towns andcities,SizeClassandFunctionalClassification oftownsandTrendofUrbanizationoftheworld

PRACTICAL

1. Drawing of agesex pyramidofdeveloped,developing and underdevelopedcountries
2. Drawingofpopulationdistributionmapsusingsymbols–Simpleandmultipledots,circlesandspheres,choropleth mapsofpopulationdensitydistribution
3. Drawing ofPieDiagram(Usingpopulationdataofoccupationalstructure,populationcomposition)
4. Trendofpopulationgrowth,growth ofurban populationandsettlements
5. Practicalrecordsandviva –voce

Text Book:

1. Hussain,Majid (2012) HumanGeography.RawatPublications, Jaipur

ReferenceBooks:

- Human& Economic Geography- Go chengleong
- Johnston R;GregoryD, PrattG.et al.(2008) The Dictionaryof Human Geography, BlackwellPublication.
- Daniel,P.A.andHopkinson,M.F.(1989).TheGeographyofSettlement,Oliver&Boyd,London.HumanGeography, RupaPublication
- HumanGeography, B.S. Negi
- Chandna,R.C.(2010)Population Geography,KalyaniPublisher.
- Hassan,M.I.(2005) Population Geography,RawatPublications,Jaipur
- Jordan-Bychkovetal.(2006)TheHumanMosaic:AThematicIntroductiontoCulturalGeography.W.H.Freeman andCompany,NewYork.

C-2.2:CLIMATOLOGY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. Toestablishastrongfoundationonclimatologywithfocusingonalltheelementsofatmosphereandresultantprocesses

Course Outcome

1. Understand the elements of weather and climate and its impacts at different scale
2. Comprehend the climatic aspects and its bearing on planet earth.
3. Understand the mechanisms and genesis of various climatological disasters

THEORY

UNIT- I:

CompositionandStructureoftheatmosphere,InsolationandHeatBudgetoftheEarth,WorlddistributionofTemperature, FactorsofDistribution and TemperatureInversion

UNIT-II:

AtmosphericPressureandWinds– PressureBeltsandPlanetaryWinds,Periodicandlocalwinds,Factorsaffectinggeneralcirculationofwind,corrioliseffect,Jet Stream.

UNIT-III:

Humidity:relativeandabsolute,FormsofCondensation,typesofclouds,typesofprecipitation,classificationofclimate ofKoppenandThonrthwait.

UNIT-IV:

Conceptofairmass,classification,characteristics,distributionandmodification.Thunderstormsandtornado.TropicalCyclone s,TemperateCyclones,weatherforecasting.

PRACTICAL

1. Introductiontouseofsimpleweatherobservationinstruments:Thermometer,Barometer,hygrometer,anemometer,windvane, RainGauge,StevensonScreen,Interpretationofweathermaps
2. Drawingof ClimographandHythergraph, Windrosediagram.
3. Drawing of isoplethmaps:isotherms, isobarsand isohyets
4. Spatialand temporaldistribution ofrainfallusing choroplethtechniquesandtrend graphs
5. Record & Viva-Voce carries10 marks

TextBooks:

1. Lal,D S (2006):Climatology,PrayagnPustakBhavan,Allahabad

ReadingList:

- BarryR. G.and CarletonA.M.,2001: *Synoptic and Dynamic Climatology*, Routledge,UK.
- Barry R. G.and Corley R.J.,1998:*Atmosphere,Weatherand Climate*, Routledge,NewYork.
- Critchfield H. J.,1987:*GeneralClimatology*, Prentice-HallofIndia,NewDelhi
- LutgensF.K.,TarbuckE.J.andTasaD.,2009:*TheAtmosphere:AnIntroductiontoMeteorology*,Prentice-Hall, EnglewoodCliffs,NewJersey.
- OliverJ.E. andHidore J.J., 2002:*Climatology:An AtmosphericScience*, PearsonEducation,NewDelhi.
- TrewarthaG. T.and HorneL.H., 1980:*AnIntroduction toClimate*,McGraw-Hill.
- Gupta L S(2000):JalvayuVigyan,Hindi MadhyamKaryanvayNidishalya,Delhi VishwaVidhyalaya, Delhi
- Vatal,M (1986):BhautikBhugol,CentralBookDepot, Allahabad
  Singh, S(2009):JalvayuVigyan,PrayagPustakBhawan,Allahabad

GE-2.3:GEOGRAPHYOFINDIA

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. To teach students about thephysical, climatological,demography, mineral reserves of India and utilizing them in sustainable manner.

Course Outcome

1. Understand the physical profile of the country.
2. Study the resource endowment and its spatial distribution and utilization for sustainable development.
3. Synthesize and develop the idea of regional dimensions.

THEORY

UNIT- I:
PhysiographicDivisionsof India,soil andvegetation, climate(characteristicsandclassification)

UNIT-II:
Population:Distributionandgrowth,Demographicstructure,Distributionofpopulationbyrace,religion,languageand tribes,urbanization.

UNIT-III:
Mineralandpowerresources:distributionandutilizationofironore,coal,Petroleum,Naturalgas,NuclearMinerals: Irrigation,Croppingpattern,Production& distributionofrice,wheat,Tea,Coffee.

UNIT-IV:
Industrialdevelopment:Ironandsteel,Aluminum,AutomobileandInformationtechnologyTransportinIndia:Road,RailandA irways,Waterways.

PRACTICAL

1. Studyand interpretationof topographicMaps
2. Cartograms– Pair-Bardiagram,complexbar,wheeldiagram
3. Mapsdrawing –Simpledotmaps, Multipledotmaps
4. Practicalrecord and viva-voce

TextBooks:

1. Sharma,T.C. (2013)EconomicGeography ofIndia. RawatPublication,Jaipur
2. Khullar, D.R.India:AComprehensiveGeography

ReadingList:

- DeshpandC. D., 1992:India:ARegionalInterpretation, ICSSR, NewDelhi
- Johnson,B. L.C.,ed. 2001.GeographicalDictionaryof India,Vision Books,NewDelhi
- SdyasukGalinaandP. Sengupta(1967):Economic Regionalisation of India,Censusof India

AECC- 2.4:ENVIRONMENTAL STUDIES & DISASTERMANAGEMENT (FOR COMMERCESTREAM)

Full Marks – 100
Mid Sem – 20/1 hr
EndSem–80/3hrs

UNIT– I(Environment)

The Environment: The Atmosphere, Lithosphere, Hydrosphere, BiosphereEcosystem: Energyflowintheecosystem BiogeochemicalCycle:WaterCycle,Carbon Cycle,NitrogenCycle
Pollution:WaterPollution,AirPollution,SoilPollution,RadiationPollution,IndustrialPollution,LightPollution,SoundPollution
EnvironmentalLaws: WaterAct1974,AirAct1981,theWildlifeProtectionAct1972,TheEnvironmentProtection Act1986,TheForestConservationAct 1980

UNIT– II(ClimateChange&SustainableDevelopment)

Population Ecology: Individuals, Species, Population, CommunityHuman Population Growth, Population Control MethodsUrbanizationanditseffectsonSociety
ClimateChange :Causes,effect, GlobalWarming, Carbonfootprintand environmentalprotection
Stepstakentowardssustainabledevelopment:Banofsingle-useplastics,AutomobileScrappingPolicy,PromotionofElectrical Vehicles.
Briefidea on SustainableDevelopment:Goals(SDGs), Agenda 21ofRio Earth Summit

UNIT– III(DisasterManagement)

DisasterManagement :Typesof disasters(Naturaland Man-made) and theircausesandeffect
VulnerabilityAssessmentandRiskAnalysis:Vulnerabilitytovariousdisasters(Flood,Cyclone,Earthquake,Heatwavesand Lightning)
InstitutionalFramework:Institutionalarrangementsfordisastermanagement(NationalDisasterManagementAuthority(NDMA),StateDisasterManagementAuthority(SDMA),DistrictDisasterManagementAuthority(DDMA), National Disaster Response Force (NDRF) and Odisha Disaster Rapid Action Force (ODRAF)PreparednessMeasures:DisasterManagementCycle,EarlywarningSystem,Pre-DisasterandPost-DisasterPreparedness,StrengtheningofSDMAandDDMA,CommunityPreparedness,Stakeholderparticipation,Corporate SocialResponsibility(CSR)
SurvivalSkills:SurvivalSkillsadoptedduringandafterdisaster(Flood,Fire, Earthquake,Cyclone,and Lightening)

UNIT– IV

Briefideaon EpidemicsandPandemics
Non-communicable diseases with special reference to cardiovascular diseases, Cancer, Diabetes, Hypertensionand Obesityandtheirprevention
Communicable diseases with special reference to Covid-19, Flu, Hepatitis, AIDS and Tuberculosis and theirtransmission
Dynamics of Disease Transmission: Mode of transmission (Direct/Indirect), Events after infection: Immunity(Active vrsPassive,InnatevrsAcquired,Herd Immunity),IncubationPeriod
PreventionofEpidemics/PandemicsDiseases:PreventingMeasures(Quarantine,Sanitization,PersonalProtective measures such as hand washing and use of protective devices, Vaccination); Control Measures(Surveillance, Isolation,Contact Tracing)
Life Stylemanagement:Diet,Physical Exercise, Yogaandsleeping habit
Role of Different Sectors in Managing Health Disaster: Role of Government (Centre and State), Community,CivilSociety,Studentmass,NGOs

BooksRecommended:

- AsthanaDK and AsthanaM :AText Book ofEnvironmentalStudies, S.Chand, NewDelhi.
- BharuchaE :ATextBookofEnvironmentalStudies, NewDelhi, UGC.
- Dash MCand MishraPC: ManandEnvironment,McMillan, London.
- DisasterManagement andMitigation Plan,2013ofDept.ofHealth& FamilyWelfare,Govt. ofOdisha*
- MishraDD:*FundamentalConceptin EnvironmentalStudies*,S. Chand, NewDelhi.
- NationalPolicy on DisasterManagement,2009*
- NationalDisasterManagementPlan, 2019*
- Odeem EP, *FundamentalsofEcology*, NatrajPublications.
- StateDisaster ManagementPlan, 2019of Governmentof Odisha*
- StandardOperatingProcedure(SOP)issuedbyGovt.ofIndiaandGovt.ofOdishaonPublicHealthManagementsinthewebsiteswww.mohfw.gov.inandhealth.odisha.gov.in*
- The Disaster ManagementAct.2005ofGovernmentofIndia*

[Note:Star(*)markedReference,publishedbytheStateaswellasCentralGovernmentareavailableintheopensources]

SEMESTER-III

C-3.1: OCEANOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. To create a deeper understanding on oceanic landforms and processes with their global distribution keeping challenges encountered in the past and future scenario of the ocean lives

Course Outcome

1. Understand the oceanic process and Availability of resources
2. Understand the evolution of various oceanic topography and features.
3. Know various process related to oceanic circulation and effect on globe

THEORY

UNIT- I:
BottomReliefoftheOceans:Continentalshelf,slope,deepseaplain,oceandeeps,midoceanicridges,relieffeaturesoftheAtlantic,IndianandPacificOcean

UNIT-II:
Originofoceanwater,Temperatureandsalinityofocean-distributionanddeterminants,T-SDiagramOceanDeposits:classificationandDistribution.

UNIT-III:
Movementof Ocean water-Waves,Currents and Tides:Types andcharacteristics, factorsassociatedwiththeoriginofoceancurrentsandtheirimpacts,Oceancurrentsof theAtlantic,IndianandPacificOcean

UNIT-IV:
Coral Reefs andatoll:Types,Theories ofOrigin(Subsidence theoryofDarwinandDana, Glacial ControltheoryofLouisAgassiz),Marinedeposits

PRACTICAL

1. InterpretationofTopographicalMaps.
2. Demarcationofcatchmentbasinsanddrainagenetworks,streamorderingandidentificationandinterpretationofdrainagepatterns.
3. Enlargementand reductionofmaps:Graphicalandinstrumental,useofpantographs
4. Practicalrecordsandviva –voce

TextBooks:

1. Sharma R. C.andM.Vital:Oceanography
2. Lal,D.S.– Oceanography.

ReferenceBooks:

- King, L. C. :Oceanography
- Singh,S.– PhysicalGeography

C-3.2: STATISTICAL METHODSINGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. To introduce inferential anddescriptivestatisticswithusesinresearchmethodology

Course Outcome

1. Understandthebasicsofdatacollectionand processing for the meaningfuloutcomes.
2. Comprehendtherepresentationand interpretationoftheresults.
3. Put into practice results obtained inrepresentationaswellasday-to-daylife

THEORY

UNIT- I:

UseofDatainGeography:Spatialandattributedata,TypesandSourcesofData(Discreteandgrouped,primaryandsecondary) ,Scales of Measurementofdata (Nominal, Ordinal,Interval, and Ratio).Distribution ofData: NormalandBi-nominal

UNIT-II:

Descriptive Statistics: Frequency distribution (grouped and ungrouped data), measures of Central Tendency (Mean,Median andMode),TypesofSampling-Random, stratified,systematicandpurposive

UNIT-III:

Measures of Dispersion (Variance, Mean Deviation, Standard Deviation and Coefficient of Variation).Chi-squaretest.

UNIT-IV:

Measures of Association: Product moment correlation, Rank correlation, coefficient of determination and linearregression.

PRACTICAL

1. Drawing ofhistogram,frequency curveand ogive in grouped anddiscretedata
2. Calculation & Drawing ofgraphsshowing mean,median,mode ingrouped&discretedata
3. Calculation ofmeandeviation,standarddeviation,coefficientofvariation,
4. Practicalrecordsandviva –voce

TextBooks:

1. MahmoodA., 1977:*Statistical Methodsin Geographical Studies*,Concept.
2. Sarkar,A.(2013)Quantitativegeography:techniquesandpresentations.OrientBlackSwanPrivateLtd.,NewDelhi

ReferenceBooks:

- HammondP.andMcCullaghP.S.,1978:*QuantitativeTechniquesinGeography:AnIntroduction*,OxfordUniversity Press.
- YeatesM., 1974:*An Introduction toQuantitativeAnalysisinHuman Geography*, McGrawHill, NY
- Silk J.,1979:*StatisticalConceptsin Geography*,AllenandUnwin,London
- KingL.S.,1969:*Statistical Analysisin Geography*,Prentice-Hall
- PalS. K.,1998:*Statisticsfor Geoscientists*,Tata McGrawHill,NewDelhi
- EbdonD.,1977:*StatisticsinGeography:APracticalApproach*.

C-3.3:GEOGRAPHYOFODISHA

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. To study the physical, economic and social geography of Odisha..

Course Outcome

1. Students will lean in to thephysiography,drainage,climate andagriculturalscenarioofOdisha
2. Know the industrial andmineral availability in Odisha with knowing the naturalvegetation intensity.
3. Students will understand the natural hazards and vulnerability of Odisha against the multi-hazards(Covid-19 included) Understandthedemographyandspatial distribution of various tribes in Odisha

THEORY

UNIT- I:

PhysiographyofOdisha,RiverSystem,Climate,Soil,NaturalVegetation

UNIT-II:

Agriculture:(a)Production and Distribution ofRice,Pulses,Oilseeds;(b)AgriculturalProblemsand Prospects

UNIT-III:

Mineralsand powerrecourses:

a. DistributionandproductionofIronOre, Bauxite,Chromite,Coal
b. Industrialization in Odisha – Problems and prospects, Iron and steel industry, AluminumIndustry,Textile,thermalpowerplants

UNIT-IV:

a. Population:Distribution and Growth,distribution of tribesand tribalpopulation
b. Urbanization-Growthofurban populationandurban centers
c. Transport:Roadways& Railways

PRACTICAL

1. Rainfalldistribution ofOdishausing choroplethtechniques(State &District/District&block)
2. Temperature/rainfalldistributionusingisoplethtechniquesgivingpointleveldataofimportantobservationcenters
3. Drawing oftimeseriesgraphstodepictdecadal growthofpopulation/urbanpopulation
4. Cartographicrepresentationofsocio-economic data(One, twothreedimensional)
5. Practicalrecordsandviva –voce

Text Book:

1. Sinha,B. N.- Geography of Odisha

ReferenceBook:

- Roy,G. C. - GeographyofOdisha

SEMESTER-IV

C-4.1:EVOLUTION OFGEOGRAPHICALTHOUGHT

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. To make students to understandaboutthepast,presentandfutureofGeography.

Course Outcome

1. Distinguish the paradigms in geography discipline through time
2. Understand the geographical thinking in different regions of the world
3. Appreciate the past and future trends of world geography in general and Indian geography in particular

THEORY

UNIT- I:
Geographicalconceptsofancient and medievalperiod:ContributionsofGreek,Roman&Indianand Arabscholars.

UNIT-II:
Moderngeographicalthought:ContributionsofAlexanderVonHumboldt,CarlRitter,Ratzel,VidalDeLaBlacheandMackinder.

UNIT-III:
DichotomyinGeography–
EnvironmentalDeterminismandPossibilism,SystematicandRegionalGeography,PhysicalandHumanGeography.

UNIT-IV:
RecentTrendsindevelopmentofgeography–QuantitativeRevolutioninGeography,BehaviouralapproachinGeography.

PRACTICAL

1. IntroductiontoanduseofsurveyInstruments:PrismaticCompass,Leveling,Theodolite/TotalStation,
2. Methodsof Surveying:Radiation,Intersection, ResectionTraversing (Closeand Open)
3. UseofGPS/DGPSinobservationofcoordinatevaluesofanumberofpointsandpreparinganoutlinemapofanareabyinterpolation
4. Preparationand usesofquestionnaire andschedule in asocio economicsurvey
5. Practicalrecordsandviva –voce

Text Book:

1. EvolutionofGeographical Thought-MajidHussain

ReferenceBooks:

- DikshitR. D., 1997:GeographicalThought:AContextualHistory of Ideas,Prentice– Hall India.
- HartshoneR., 1959:*PerspectivesofNature ofGeography*, Rand MacNally and Co.
- MartinGeoffrey J.,2005: *AllPossibleWorlds: A History ofGeographicalIdeas*, Oxford.
- Holt-JensenA., 2011:*Geography:History andItsConcepts: A StudentsGuide*, SAGE.
- KapurA.,2001:*IndianGeography Voice ofConcern*, ConceptPublications.

C-4.2:ECONOMICGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. To introduce various dimensions of economic geography with respect to global record

Course Outcome

1. Thestudentswillbeacquaintedwithvarious dimension of economicgeography.
2. Studentswilldigintoresourcegeography,agriculturalgeography,industrialgeographyandtransportgeography

THEORY

UNIT- I:

Meaningandscopeofeconomicgeography,classificationofeconomicactivities,VonThunenTheoryoflocationofagricultura lactivityandWeber'stheoryofIndustrialLocation.

UNIT-II:

Primaryeconomicactivities:Typesandproblems,(Subsistencefarming,shiftingcultivation,forestryandfishing,miningand quarrying),agriculturalregionsoftheworld.

UNIT-III:

Secondaryeconomicactivities:Manufacturing(CottonTextile,IronandSteel),IndustrialRegionsoftheworld:SpecialEcono micZonesanditssignificance.

UNIT-IV:

Tertiaryeconomicactivities:Transport-Roadsand Railways,Airand Waterways

PRACTICAL

1. Determination ofagriculturalefficiency (KendalandBhatiamethod) and toshow onmaps.
2. Drawing ofIsotims, Isodapanesandindustriallocationbasedon Weber'stheory.
3. Trafficflowdiagram andtraveltimemaps(Isochrones).
4. Practicalrecordsandviva –voce

TextBooks:

1. Roy, Pritish:*EconomicGeography*
2. Gautam, Alaka:*EconomicGeography*,

ReferenceBooks:

- AlexanderJ.W.,1963:*Economic Geography*, Prentice-HallInc., EnglewoodCliffs, NewJersey.
- WheelerJ.O.,1998:*EconomicGeography*,Wiley.
- Durand L.,1961:*Economic Geography*,Crowell.
- WillingtonD.E., 2008:*EconomicGeography*, HusbandPress.
- Clark,Gordon L.;Feldman,M.P. andGertler, M.S., eds.2000: The*Oxford*

C-4.3:ENVIRONMENTALGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. Various dimensions of the ecosystems, their spatial distribution. Anthropogenic interventions and resultant impacts on various ecosystems.
2. Understanding of environmental governance

Course Outcome

1. Detailedexposuretotheconceptofecosystem, processes, theories andconcepts. In-depthknowledgeof anthropogenicinterventions andimpacts,conservationstrategiesandplanning.Evaluationandachievementofdifferentenvironmental programs, policies andlegislations

THEORY

UNIT- I:

EnvironmentalGeography –Concept andScope, TypesandCharacteristicsof environment:
Biotic, abiotic and cultural, Environmental contrast (Global, Continental, Local) Environmental control and conceptoftolerance(Light,Temperature,Water,TopographyandEdaphicfactors)

UNIT-II:

Ecosystem – Concept, Structure and Functions, Trophic level, food Chain and food web, Biogeo-chemical Cycle(Nitrogen andCarbon),EnergyflowinEcosystem.

UNIT-III:

Concept of Biome, Major biomes of the world and their characteristics: Equatorial, Subtropical, Temperate andPolar, Natureandcharacteristicsofenvironmentalpollutionofwaterand air

UNIT-IV:

Environmentaldegradation;causesandconsequences,Environmentalconservationmethods,programmesandpoliciesinIndi a,RoleofInternationalagencies(UNEP,IUCN)inenvironmentalmanagement,conceptandstrategiesofsustainabledevelopm ent,Green Tribunal anditsfunctionsin India.

PRACTICAL

ProjectWork:

Submission of a ProjectReporton any environmentalproblemofglobal/national/localsignificance

TextBooks:

1. Santra,S.C*EnvironmentalScience*
2. SinghS.,1997:*EnvironmentalGeography*,PrayagPustakBhawan. Allahabad.

ReferenceBooks:

- ChandnaR. C., 2002: *EnvironmentalGeography*, Kalyani,Ludhiana.
- CunninghumW.P. and CunninghumM.A.,2004:*PrincipalsofEnvironmentalScience: Inquiryand*
- *Applications*,Tata MacgrawHill,NewDelhi.
- GoudieA.,2001:*TheNatureoftheEnvironment*,Blackwell,Oxford.
- MillerG.T., 2004:*EnvironmentalScience: Workingwith the Earth*,Thomson BrooksCole, Singapore.
- Odum,E.P.etal,2005: *FundamentalsofEcology*,CeneageLearningIndia.

GE-4.4: HUMANGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. Torecognizevariousaspectsofhuman life and interrelation with geography

Course Outcome

1. Know the changing human and cultural landscape at different levels.
2. Understand patterns and processes of population growth and its implications. Appreciate the nature and quality of human Landscapes

THEORY

UNIT- I:

Meaningand scopeofHumanGeography;MajorThemes;Contemporary Relevance and subfields

UNIT-II:

Majorracesof mankind,theircharacteristics and distribution,CulturalRealms of the world; Religionand LanguageofWorld

UNIT-III:

Worlddistributionofpopulation,worldPopulationGrowth,PopulationComposition;DemographicTransitionTheory

UNIT-IV:

Types&PatternsofRuralSettlements;UrbanSettlements;Definition,sizeandfunctionalclassification,characteristics, TrendsandPatternsofWorldUrbanization

PRACTICAL

1. Populationdistributionbymultipledotsandpopulationdensity
2. DecadalPopulation Growth-Timeseriesgraphs,bardiagrams
3. PieDiagram showing occupationalstructure and populationcomposition
4. Population ProjectionbyA.PandGPmethod
5. PracticalRecord and Vivavoce

Text Book:

1. Hussain,Majid (2012) HumanGeography.RawatPublications, Jaipur

ReadingList:

- Hassan,M.I.(2005) Population Geography,RawatPublications,Jaipur
- Daniel, P.A.andHopkinson,M.F.(1989) TheGeographyofSettlement,Oliver&Boyd,London.
- Johnston R;GregoryD, PrattG.et al.(2008) The Dictionaryof Human Geography, BlackwellPublication.
- Jordan-Bychkovetal.(2006)TheHumanMosaic:AThematicIntroductiontoCulturalGeography.W.H.Freeman andCompany,NewYork.
- Kaushik, S.D.(2010) ManavBhugol, Rastogi Publication,Meerut.
- Maurya,S.D.(2012)ManavBhugol, ShardaPustakBhawan.Allahabad.
- Hussain,Majid (2012) ManavBhugol.RawatPublications,Jaipur

SEMESTER-V

C-5.1: REGIONAL PLANNING ANDDEVELOPMENT

Full Marks – 100
MidSem –15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. Theobjectiveofthecourse istodeveloptheknowledgeaboutregionalattributes,classificationandapproaches and theories involved inregionalplanningand development

Course Outcome

1. Identify completion of course, the students will have the ability to Notable lagging regions and solutions for their overall development
2. Have comprehensive understanding regarding the different regions and application of different models and theories for integrated regional development
3. Select appropriate indicators for the measurement of socio-economic and regional development.

THEORY

UNIT- I:

ConceptofaRegion,Typesofregion:Formal,FunctionalandPlanningRegion,NeedforRegionalPlanning,EvolutionofRegionalplanninginIndiaduringfiveyearplans

UNIT-II:

DelineationofPlanningRegions;ApproachesandMethods,Regionaldisparityandimbalancesin India,PlanningRegionsof India

UNIT-III:

Theoriesand ModelsforRegionalPlanning:Growth Pole Modelof Perroux; Myrdal,Hirschman, Rostow.

UNIT-IV:

Policies and Programs for Rural and Regional Development Planning in India, Welfare Programs: IRDP, DPAP,Planning for backward regions, TDA and ITDP, Concept and application of Human development Index in planninganddevelopment

PRACTICAL

1. Transportnetwork analysis–Alfa,Beta,Gama indices
2. Nearest neighboranalysis
3. MappingregionalDisparitybased onsocio-economicdata
4. Mappinglevelsofdevelopmentbasedonsocio-economicdata
5. Practicalrecord and viva-voce

TextBooks:

1. Chand,Mahesh andV. K.Puri:RegionalPlanning
2. MishraR. P:RegionalPlanning, ConceptPublishers, NewDelhi

ReferenceBooks:

- FriedmannJ.andAlonsoW.(1975):*RegionalPolicy-ReadingsinTheoryandApplications*,MITPress,Massachusetts.
- HaynesJ., 2008:*DevelopmentStudies*, Polity ShortIntroduction Series.
- PeetR., 1999:*TheoriesofDevelopment*, TheGuilfordPress,NewYork.
- UNDP2001-04:*Human DevelopmentReport*,OxfordUniversity Press.
- WorldBank 2001-05:*WorldDevelopmentReport*,OxfordUniversity Press,New

C-5.2: REMOTESENSINGANDGIS

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. The objective of the course is to align the students with the modern ways of capturing remotely sensed data and techniques to use in reallife.
2. The objective of the course is to familiarize students with the GIS and its application in Geographical analysis.

Course Outcome

1. Know about various remote sensing platforms, sensors, satellites and data products. Know the fundamental concept remote sensing technology and physics of Electro Magnetic Radiation (EMR)&EM
2. Understand the aspects related to satellites and digital image processing (image enhancement, contrast manipulation, image classification) with the application of RADAR and LIDAR
3. Understand various components and principles of GIS
4. Learn GIS data types and acquisition to construct the thematic maps using different digital layers. Have comprehensive understand application of GIS for the construction of maps and their use the development planning

THEORY

UNIT- I:

Remote Sensing:Definition andComponents,EMS and EMR,Wave andParticle theory of EMR,Types ofplatforms andsensors, Advantages and limitationof RemoteSensing, Energy interactionwithAtmosphereandEarthSurfacefeatures(Water,soilandvegetation)

UNIT-II:

AerialPhotography, Principles ofstereo vision, Geometryof Aerial Photographs, Imageelements and visualinterpretationofsatelliteimages.

UNIT-III:

GIS: definition and components, Types of GIS Data (Spatial and attribute), Raster and Vector Data models, SpecialfunctionsofGIS,GPS elementsanditsuses.

UNIT-IV:

Application of RS & GIS in land use and land cover mapping, Application in cartography and map making,MappingofwaterresourcesandNatural Vegetation

PRACTICAL

1. Stereoscopicvision usingstereo cardsand identificationofobjectsfrom cards
2. Featureidentification from aerial photographsusingPocketstereoscope/Mirrorstereoscope
3. Featureidentificationfromsatelliteimageriesusingvisualinterpretation
4. Identification and mappingofwater bodiesfromsatellite imageries
5. Digitization of Odishastate/block/districtmap and drawingof fewpoint, line and polygonfeatures

Text Book

1. LillesandT.M.,KieferR.W.andChipmanJ.W.,2004:*RemoteSensingandImageInterpretation*,Wiley.(WileyStudent Edition).

ReferenceBooks:

- Bhatta,B. (2008)RemoteSensing andGIS, OxfordUniversityPress,NewDelhi.
- CampbellJ.B., 2007:*Introduction toRemote Sensing*,GuildfordPress
- Chauniyal,D.(2010) SudurSamvedanaAvamBhaugolikSuchnaPranali, ShardaPustakBhawan, Allahabad.
- Jensen,J.R.(2005)IntroductoryDigitalImageProcessing:ARemoteSensingPerspective,PearsonPrentice-Hall.
- Joseph,G. 2005:*FundamentalsofRemote Sensing*United PressIndia.

DSE-5.3: POPULATIONGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. To enhance the knowledge regarding population and population related problems of World and India

Course Outcome

1. Students understand the population growth and pattern of World and India.
2. Understand the various problems and analyze problems.
3. Suggest the measures for eradication of the problems.

THEORY

UNIT- I:

Defining the Field, Nature and Scope of population geography; Sources of population data with special reference toIndia(Census,VitalStatisticsandNSS),Populationproblemsandissues.

UNIT-II:

Population Size, Distribution and Growth – Factors and Determinants, Theories of Growth –Malthusian Theory andDemographic TransitionTheory.

UNIT-III:

Determinants of Population Growth: Fertility, Mortality and Migration-Measures, determinants and implications offertility,mortalityandmigration.

UNIT-IV:

PopulationCompositionandCharacteristics–Age-Sex,Rural-Urban,Literacy,Occupationalstructure,Contemporary population issues–Ageing of Population; Declining Sex Ratio; HIV/AIDS, Trend of urbanization andrelatedProblems.

PRACTICAL

1. Population projection:AP, GPand R.GIndiamethod,calculation andgraphicaldisplay
2. Drawing of triangulardiagramandLorenz curve
3. Construction of compoundand superimposedpyramids
4. CalculationandpresentationofpopulationgrowthRate,infantandneonatalmortalityrate,maternalmortalityratio basedonsupplieddata
5. PracticalrecordandViva-Voce

Text book:

1. ChandnaR. C.andSidhu M.S., 1980:*An Introductionto Population Geography*,KalyaniPublishers.

ReadingList:

- BarrettH.R.,1995:*Population Geography*,Oliver and Boyd.
- Bhende A.andKanitkarT.,2000:*PrinciplesofPopulationStudies*, HimalayaPublishingHouse.
- Clarke J.I.,1965:*PopulationGeography*,PergamonPress, Oxford.
- Jones,H.R.,2000:*PopulationGeography*,3rded.PaulChapman, London.
- LutzW.,WarrenC.S.andScherbovS.,2004:*TheEndoftheWorldPopulationGrowthinthe21st Century*,Earthscan.
- NewboldK.B., 2009:*PopulationGeography: Toolsand Issues*,RowmanandLittlefieldPublishers.
- Pacione M.,1986:*PopulationGeography:Progressand Prospect*,TaylorandFrancis.
- Wilson M.G. A.,1968:*PopulationGeography*,Nelson.
- Panda B P(1988):JanasankyaBhugol, MPHindi GranthAcademy,Bhopal
- MauryaSD (2009)JansankyaBhugol, ShardaPutakBhawan, Allahabad
- Chandna,RC(2006), JansankhyaBhugol, KalyaniPublishers, Delhi

DSE-5.4:RESOURCEGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. To acquire the knowledge of Resource, resource problems and sustainability of the resource.

Course Outcome

1. Understand the utility, functionality and Applicability of resources.
2. Understand the theories of Resources.

THEORY

UNIT- I:

NaturalResources: Concept,Types,Classification,and FunctionalTheory ofResources

UNIT-II:

DistributionandUtilizationofLandResources,WaterResources,ForestresourcesandEnergyResourcesandmineral resources.

UNIT-III:

Problemsinexploitation,depletionanddegradationofresources,MethodsofconservationandmanagementofLand, Water,Forest,mineral&EnergyResources

UNIT-IV:

Resourcescarcity hypothesis, Conceptand approachtowardssustainable developmentof resources

PRACTICAL

1. SimpleCorrelationandinterpretationofcorrelationcoefficient
2. Testof significanceofcorrelation coefficient
3. RankCorrelation
4. SimpleLinearRegression,Drawing ofscattergramandregression line
5. Practicalrecord and viva-voce

Text book:

1. Singh, R.L.1988(Reprint)—India:ARegionalGeography

ReadingList:

- GadgilM. and GuhaR.,2005:*The Useand Abuse ofNature: Incorporating ThisFissured Land: An*
- *EcologicalHistoryofIndia andEcologyandEquity*,OxfordUniversityPress.USA.
- JonesG.&HollierG.,1997:*Resources,SocietyandEnvironmentalManagement*,PaulChapman,London.
- KleeG., 1991: *Conservation ofNaturalResources*, PrenticeHall, Englewood.
- MatherA. S.and Chapman K.,1995:*EnvironmentalResources*, JohnWiley and Sons,New York.
- MitchellB., 1997:*Resourceand EnvironmentalManagement*, Longman Harlow,England.
- OwenS. andOwen P. L.,1991:*Environment,Resourcesand Conservation*,CambridgeUniv. Press,NY

ReesJ., 1990:*NaturalResources: Allocation, Economicsand Policy*, Routledge.London.

SEMESTER-VI

C-6.1: GEOGRAPHY OFINDIA

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. To teach the students about the geography of India about the physical, climatological ,demography and mineral reserves and utilities for sustainable development

Course Outcome

1. Understand the physical profile of the country
2. Study the resource endowment and its spatial distribution and utilization for sustainable development
3. Synthesise and develop the idea of regional dimensions

THEORY

UNIT- I:

Tripletectonicdivisions,Physiographyof the Himalayas,Indo-GangeticPlains,PeninsularIndia,Climateof India:WeathercharacteristicsofSWandNEMonsoon,soilandnatural vegetation

UNIT-II:

PopulationDistribution,Demographicstructure,trendofpopulationgrowthandurbanization,Distributionofmajortribal groupsofIndia,India'spopulationproblemsandprospects

UNIT-III:

Distributionandutilisationofironore,nuclearminerals,coal,petroleum,naturalgas,Factorsoflocationanddevelopmentofautomobile,IT,Iron& Steeland CottonTextileindustries, Industrial regionsof India

UNIT-IV:

TypesofIrrigationinIndia,characteristicsofIndianAgriculture,croppingpattern,productionanddistributionofrice andwheat,TeaandCoffee,problemsofIndianAgriculture

PRACTICAL

1. Populationdensitymapof IndiabyChoropleth
2. Graphical&cartographicpresentation ofsocio-economicdata
3. Pie chartshowing occupational structure ofIndia
4. Population pyramidforIndia
5. Practicalrecord and viva-voce(10marks)

TextBooks:

1. Sharma,T.C. (2013)EconomicGeography ofIndia. RawatPublication,Jaipur
2. Khullar, D.R.India:AComprehensiveGeography

ReferenceBooks:

- DeshpandeC. D.,1992:*India:A RegionalInterpretation*, ICSSR,NewDelhi.
- MandalR.B.(ed.),1990:*PatternsofRegionalGeography–AnInternationalPerspective.Vol.3–IndianPerspective*.
- Sharma,T. C. 2003:India -Economic and CommercialGeography. VikasPubl.,NewDelhi.
- SinghR.L., 1971:*India:A Regional Geography*,National Geographical Society ofIndia.
- Singh, Jagdish 2003:*India-AComprehensive & Systematic Geography*, GyanodayaPrakashan,Gorakhpur.
- SpateO.H.K.andLearmonthA.T.A.,1967:*IndiaandPakistan:AGeneralandRegionalGeography*,Methuen.

C-6.2: DISASTER MANAGEMENT

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSemPractical–25/3hrs

Learning Objective

1. Makingstudentstounderstandallthe dimensions of natural and man-made disasters anddisastermanagementframework.

Course Outcome

1. Understandprocessesandimpactofdisaster
2. Understandboththenaturalandman-made disaster and human negligenceincontextofenvironment.
3. Gainaperspectiveofdisastersandvarious dimensions of disastermanagement.
4. Have comprehensive knowledgeofvariousnaturalandmanmadedisastersinIndia.
5. Examinetheresponseandmitigationmeasuresof disasters.

THEORY

UNIT- I:

Concept of Hazards and Disasters, Natural and manmade hazards, Types of hazards, Concept of Vulnerability andrisk,prevention,mitigationandmanagement.

UNIT-II:

Disastermanagementcycle,Predisasterplanning,Duringdisastermanagement,PostDisasterplanninganddevelopment, community based disaster preparedness, Role of various stake holders (NGO, GO, NDMA, NIDM,NDRF, ODRAF andOSDMA)indisastermanagement.

UNIT-III:

Detail study of nature, characteristics and management of natural hazards: Flood, Cyclone, Drought, Earthquake,Tsunami andLandSlide

UNIT-IV:

Man-made hazards and disasters, causes and impacts; Fire hazards, industrial hazards and nuclear hazards, SalientfeaturesofIndia'sdisastermanagementpolicy.

PRACTICAL

Projectwork–Preparationofacasestudyreportonaspecifichazard/disasterbasedonliteraturereviewandorfieldwork

Textbooks:

1. Singh, Savindar(2009):DisasterManagement

Referencebooks:

- Mishra B.J:Naturalhazardsand disaster management
- Sundar I&SezuiyanT :Disastermanagement
- Verma : Encyclopediaof Disastermanagement
- Eye Publication: Vulnerable India
- Sinha.A.– Disastermanagement, UnitedPress
- SinghR.B– RiskAssessmentand Vulnerabilityanalysis.

DSE-6.3: URBANGEOGRAPHY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. The objective of the course is toprovideanunderstandingoftheplanningofsettlementsandcommunities.Urbanplannersarealsoresponsibleforplanning theefficienttransportationofgoods,resources,peopleandwaste;thedistributionofbasicnecessitiessuchaswater andelectricity.

Course Outcome

1. Understandtheconceptofurbanhierarchies,thepatternsofurbanizationindevelopedanddevelopingcountries, the ecological processes of urban growth; urban fringe;city- region.
2. Analyze the models on city structure andidentifytheproblemsofhousing,slumsand civicactivities

THEORY

UNIT- I:
Urbangeography:Introduction,natureandscope;historyofurbanization,TrendsandPatternsofUrbanizationindeveloped, developingcountries,worldandIndia.

UNIT- II:
Functionalclassificationofcities:QuantitativeandQualitativeMethods,ChristallerTheory,MorphologyofUrbanSettlemen ts&Urban SphereofInfluence andumland,conceptofCBD,rural-urbanfringe.

UNIT-III:
Theoriesofurbangrowth,UrbanIssues:problemsofhousing,slums,civicamenities(waterandtransport),AirPollution andNoisePollution,

UNIT-IV:
CasestudiesofDelhi,Mumbai,Kolkata,BhubaneswarandChandigarhwithreferencetocityplanningandUrbanIssues .

PRACTICAL

1. Functionalclassificationof towns
2. Projectionofurban population
3. Delimitation ofC.B.Dand umland
4. Gravity andpopulation potentialmodel.
5. PracticalRecord and Viva-Voce(10 marks)

Textbooks:

1. RamachandranR(1989):Urbanisationand Urban Systemsof India, OxfordUniversity Press,NewDelhi

ReadingList:

- FyfeN.R. and KennyJ. T.,2005:*The UrbanGeography Reader*, Routledge.
- GrahamS.andMarvinS.,2001:*SplinteringUrbanism:NetworkedInfrastructures,TechnologicalMobilitiesand theUrbanCondition*,Routledge.
- HallT., 2006:*Urban Geography*, TaylorandFrancis.
- KaplanD.H., Wheeler J.O.and Holloway S.R.,2008:*Urban Geography*, John Wiley.
- KnoxP. L.&McCarthyL.,2005:*Urbanization: AnIntroductionto Urban Geography*, PrenticeHall NY.
- SassenS.,2001:*TheGlobal City:NewYork, LondonandTokyo*,Princeton UniversityPress.
- RamachandranR(1989):Urbanisationand Urban Systemsof India, OxfordUniversity Press,NewDelhi
- Ramachandran,R., 1992:*TheStudy ofUrbanisation*,OxfordUniversity Press,Delhi
- Singh,R.B.(Eds.)(2001)UrbanSustainabilityintheContextofGlobalChange,SciencePub.,Inc.,Enfield(NH),U SAandOxford&IBHPub.,NewDelhi.
- Singh,R.B.(Ed.)(2015)Urbandevelopment,challenges,risksandresilienceinAsianmegacities.AdvancesinGeo graphicalandEnvironmental Studies,Springer

DSE-6.4: FIELDWORKAND RESEARCHMETHODOLOGY

Full Marks – 100
MidSem–15/1hr
End Sem Theory – 60/3 hrs
EndSem Practical – 25/3hrs

Learning Objective

1. This course attempts tointroduce the student's tothe basic knowledgerelated to geographicalfieldresearchdesign.
2. The course examines thequestions related to datacollection,methodsanditsanalysis.It also critically evaluates thedissertation based on field survey/Toencouragestudentsforpursuingresearch in the Graduationlevel.

Course Outcome

1. Thestudentswillbeabletounderstandbasic conceptsoffieldresearchmethodsand researchdesignin geography.
2. Thestudents willbeable todofieldworkthrough practicalexperienceandgetskillsofdatacollectionmethodsandprocessingand analysis of obtaineddata.
3. The students will be able to writedissertationbasedonfieldworkongiventopic.Whilepreparingtheirdissertationstudents will be advised regularly by the Guides and will be submitting theircollecteddataand analysis.
4. This dissertation will show a student's knowledge on research methodology and application of remote sensing and GIS in real world.

THEORY

Aimofthe Course:
Tointroduceresearch aptitudeamongyounggeographers.
ObjectivesoftheCourse:
* To enablestudentstodevelop ageneralunderstandingofthemethodology ofresearch ingeography.
* Tostrengthen theneedof interdisciplinary research.
* To inculcatetheroleofCaseStudyanalysisinthemethodologyof geography.
* Tounderstandthevalueof Field Workand Primary Data in geographicalresearch.

UNIT- I: FundamentalsofResearchLiteracy

a) Meaningand objectivesof research;typesofresearch(Historical, CaseStudy,Descriptiveand Experimental),
b) SignificanceofResearch,EthicsinResearchandPlagiarism, Role and Utility ofFieldworkinGeography,
c) Sources& Typesof DataCollection(Reconnaissance, Primary&Secondary)

UNIT- II:Approachesto Research

a) ApproachandMethods ofGeographicResearch,
b) Ex-post facto,LaboratoryExperiments,
c) FieldStudyandExperiments,FieldSurveyResearch,
d) EvaluationResearchandActionResearch.

UNIT- III: Methodsand FieldTechniques

a) FieldTechniquesinGeography,SelectionofAppropriateTechnique,Observation(Participant/NonParticipant),
b) Preparation of Questionnairesand Schedules(Open /Closed /Structured /Non-Structured);
c) ParticipatoryRapidAppraisalandFocusGroupDiscussion
d) ContentAnalysis

UNIT- IV: Preparation of aResearchReport

a) DesigningtheResearchReport(DocumentationStructure,Layout,Fonts,SettingofMaps,Diagrams,Tables,Appendices , BibliographyandReference)
b) Reviewof Literatureand Different Methodsof In-textandEnd ofPaperCitation,
c) StyleofCitationinScienceandSocialScienceResearch(Books,Journals,Reports,Thesis,NewsItems,WebSources)

PRACTICAL

1. PreparationofaObservationSchedule(Participant/NonParticipant)andQuestionnaire(Open/Closed/Structured / Non-Structured);
2. Preparationof a GuideLineforFocusGroup Discussion andPRA
3. Field Testing of Questionnaireand FGD-PRAguidelineston avillagelevel socio-economic study.
4. Preparationof a ResearchReport

5. VivaVoce

Note:

i. Eachstudent will preparean individualreportbased on primary and secondarydatacollected during field work.
ii. Duration ofthe field work should notexceedoneweek.
iii. Thewordcountofthereportshouldbearound5000excludingfigures,tables,photographs,maps,referencesand appendices.
iv. Onecopyofthereport onA4sizepapershouldbesubmittedinsoft binding.

MainBooks:

1. MajidHussain (1994),MethodologyofGeography,AnmolPublication,NewDelhi.
2. K.L.Narasimha Murthy (1999),GeographicalResearch ,ConceptPublishing Company,NewDelhi

ReferenceBooks:

❖ ResearchMethodology-MethodsandTechniques,RevisedEditedbyC.R.Kothari(2004),NewAgeInternationalPublishers,NewDelhi.
❖ QuantitativeSocialResearchMethodsby KultarSingh (2007), SagePublication.
❖ SocialSurvey MethodsbyPaulNicholas(2009),OxfarmPublishersDelhi.

OR

DSE-6.4: DISSERTATION /PROJECTWORK

Full Marks 100
EndSemProject–100

A project report may be given in view of discipline specific papers. It is considered as a special course involving application of knowledge solving and exploring a real life situation and difficult problem.

* * *