CCSUniversity, Meerut

MAGeography

Syllabus
(Session2011-12onwards)

Preparedby:

BoardofStudiesinGeography

CCSUniversity,Meerut

Syllabus
(Session2011–12onwards)MAGeography

Inthelastdecadethe disciplineofGeography hasexperienced vastexpansionofknowledge, new multi –disciplinary frontiers and a technological revolution based on remotesensing and Geographic Information System (GIS). Thus to provide excellence in knowledge ofthesubjectitbecomesessentialtoincorporatethenewknowledgeinthesubjectbyupdatingandreframing the syllabus. This objective led to restructuring of syllabus of MA Geography of CCSUniversity,Meerut.

MatchingthestructurewidelydefinedforallthesubjectsofArtsFacultyoftheUniversity, the entire content was divided into 20 papers of 100 equal marks; sixteen papers oftheory, three papers of practicals and one dissertation work.There shall be equal sharing intheory papers for marks awarded by external as well as internal examiners.The University willbearrangingtoconducttheoryexaminationandevaluationbyexternalexaminersfor50marksineach theory paper.While the internal 50 marks shall be awarded by conducting 2 tests of 10marks each, for assignment or term paper writing 10 marks and its presentation 10 marks.Thebalance 10 marks shall be awarded for mini exercise of field work or mapping (diagram work orasmaybe decidedbytheteacherconcerned.

For each theory paper, the teacher shall be presenting two standard research articles ofnationalorinternationaljournalandinteractingwiththestudentsforitsobjectives,methodologiesand findings.

In all the theory papers, for purpose of examination, ten questions are to be set, 2questionsfromeachunit.Studentswillberequiredtoattempt5questionsinall,selectingatleastonequestionfromeachunit.

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AbstractofSyllabus

Semester	CourseNo.	CourseTitle	Marks		Duration(hrs.)
			Internal	External	
I	I	AdvancedGeomorphology	50	50	50
	II	NaturalResourceManagement	50	50	50
	III	HistoryofGeographicalThought	50	50	50
	IV	AdvancedGeographyofIndia (Physical&Regional)	50	50	50
Practical	V	StatisticalTechniquesand Cartography	---	100	50
II	VI	ClimatologyandOceanography	50	50	50
	VII	Laws,Models&Theoriesin Geography	50	50	50
	VIII	AdvancedGeographyofIndia (Socio-economic)	50	50	50
	IX	RegionalPlanningand Development	50	50	50
Practical	X	AdvancedCartography	---	100	50
III	XI	RecentIssuesinGeography	50	50	50
	XII	InterdisciplinaryResearchMethods andTechniques	50	50	50
	XIII(A)	Advanced Geography ofUttarPradesh (or)	50	50	50
	XIII(B)	AppliedGeography	50	50	50
	XIV	EcologyandEnvironment	50	50	50
Practical	XV	AdvancedSurveying,Remote SensingandGIS	---	100	50
	Anyoneofthefollowinggroups:				
IV	**GroupA**	**Population&Settlement**			
	XVI(A)	PopulationGeography	50	50	50
	XVII(A)	GeographyofRuralSettlements	50	50	50

Contd...2...

Semester	CourseNo.	CourseTitle	Marks		Duration(hrs.)
			Internal	External	
	XVIII(A)	UrbanGeography	50	50	50
	XIX(A)	GenderGeography	50	50	50
IV	**GroupB**	**EconomicGeography**			
	XVI(B)	AgriculturalGeography	50	50	50
	XVII(B)	GeographyofManufacturing	50	50	50
	XVIII(B)	GeographyofTransport	50	50	50
	XIX(B)	GeographyofTourism	50	50	50
IV	**GroupC**	**Socio-CulturalGeography**			
	XVI(C)	CulturalGeography	50	50	50
	XVII(C)	PoliticalGeography	50	50	50
	XVIII(C)	AdministrativeGeography	50	50	50
	XIX(C)	GeographyofHealth	50	50	50
IV	**GroupD**	**NaturalGeography**			
	XVI(D)	Biogeography	50	50	50
	XVII(D)	GeographyofWaterResources	50	50	50
	XVIII(D)	SoilGeography	50	50	50
	XIX(D)	EnvironmentalImpactAssessment	50	50	50
	XX	Dissertation	50	50	

CCSUniversity, Meerut

Syllabus(2010-11&onwards)MAGeography

SemesterI

Course I

AdvancedGeomorphology

CourseContents:

Unit- I: Nature and scope of Geomorphology, Recent observations on some Fundamentalconcepts– uniformitarianism,multicyclicandpolygeneticevolutionoflandscapes.

Unit- II:Earth movements – epeirogenic and orogenic earth movements. Forces of crustalinstability,isostasy,platetectonics,vulcanicity.

Unit- III:ExogenicProcesses:Conceptofgradation, Agents and processes of gradation,causes,typesandclassificationofweathering,massmovement,erosional,and depositionalprocessesandresultantlandformsandsoilformation.

Unit- IV: Landscape evaluation models: WM Davis, Penck, LC King, dynamics of fluvial,glacial,Aeolian,marine,andkarstprocessesandresultinglandformscomplexities ingeomorphologicalprocesses.

Unit- V:Appliedgeomorphology–hydro-geomorphology, urban geomorphology,environmentalgeomorphology,geomorphichazardsandmitigationm easures.

SuggestedReadings

- Ahmed,E.(1985):Geomorphology,KalyaniPublishers,NewDelhi.
- Bloom,A.L.(1998/2001):Geomorphology,3rdEdition,PrenticeHallofIndia,NewDelhi.
- Chorley,R.J.,Schumm,S.A.andSugden,D.E.(1984):Geomorphology,MethuenandCompan yLtd., London.
- Chorley,R.J.(1972):SpatialAnalysisinGeomorphology,Methuen,London.
- Dayal,P.(1996):ATextBookofGeomorphology,ShuklaBookDepot,Patna.
- Dury,G.H.(1959):TheFaceoftheEarth,PenguinHarmondsworth.
- Fairbridge,R.W.(1968):EncyclopediaofGeomorphology,Reinholdts,NewYork.
- Garner,H.F.(1974):TheOriginoflandscape-ASynthesisofGeomorphology,OxfordUniversityPress, London.
- Singh,Savindra:Geomorphology(inHindi).

CourseII
NaturalResourcesManagement

CourseContents:

Unit-I

Introduction:Concept,modelsandapproachestonaturalresourcemanagement;problemsofresourceutilization;populationpressure,developmentandresourceuse;naturalhazardsandriskmanagement.

Unit-II

UseandmisuseofResources:GlobalandIndianscenario;historicalbackgroundandfutureprospectsofvariousresources;soil,water,minerals,forests.

Unit-III

Conservationandmanagementofresources:Meaning,principles,philosophyandapproachestoconservation;resourceconservationandmanagementmethods.

Unit-IV

Resourceappraisalandpolicymaking:appraisalofLandresources,geophysical, geochemical, geobotanical; Policy models towards better management andconservationofresources.

Unit-V

ResourceDevelopment:Sustainableresourceconcept,methods,dimensionandsustainablesystem;integratedresourcedevelopmentanditsapplication.

SelectedReadings

- Adams,W.M.:GreenDevelopment:EnvionmentandSustainabilityintheThirdWorld,RoutledgeandChapmanHall,NewYork,1990.
- Burton,I.AndKates,R.W.(1978):ReadingsinResourcesManagementandConservation.McGrawHill,NewYork.
- Clark,G.L.,Feldman,M.P.andGertler,M.S.(eds.)(2000):TheOxfordHandbookofEconomic Geography.OxfordUniversityPress,OxfordandNewYork.
- Ehrlich, P.R., Ehrlich, R.H. and Holdren, J.P. (1998): Ecoscience: Population, ResourcesandDevelopment.2nd edition.FreemanandCompany,SanFrancisco.
- Granfelt,T.R.(1999):ManagementtheGlobalizedEnvironment,J.&L.CompositionLtd,New York.
- Holechek,J.L.etal(2000):NaturalResources:Ecology,Economics&Policy,PrenticeHall,NewJersey.
- Hooja,R&Joshi,R.(1994):Desert,DroughtandDevelopment,StudiesandResourceManagementandsustainability;RawatPublication,Jaipur.
- Kates,R.W.&Burton,I.(eds)(1986): Geography,ResourcesandEnvironment,VolI &II,UniversityofChicagoPress,Chicago.

CourseIII
HistoryofGeographicalThought

CourseContents:

Unit- I : The field of geography: Meaning, philosophy and purpose of Geography. Geographyas a social science and natural science. Concepts in the philosophy of geography – distributions,relationships,interactions,arealdifferentiationandspatialorganization.

Unit-II:Geography in the ancient and medieval period: Contribution of Greek and RomanGeographers- Character of Geography in medieval period- the Dark Age, the Arabicperiodandthe Renaissanceperiod.

Unit-III:Geographyinthemodernperiod:ContributionofGerman(Humboldt,Ritter&Ratzel),French(BlacheandBrunhes),Russian(Gerasimov,Lomonosov),British(L.D.StampandMackinder)andAmerican(RichardHartshorne,Semple&Huntington)Schools.

Unit-IV:Dualismsingeography:systematic&regionalgeography;physical& humangeography. The myth and reality about dualism. Regional geography. Concept ofregion,regionalizationandtheregionalmethods.

Unit-V:History and Development of Geographical Thought in India: Contribution of IndianScholars in Geography. Geographical contribution in British Period. Development ofIndian Geography after independence. Expansion of Geography Teaching in IndainUniversitiesandProfessionalInstitutions.

SuggestedReadings:

- Abler,Ronald;Adams,Jons,S.Gould,Peter,N.J.(1971):SpatialOrganization:TheGeographer'sViewoftheWorld,PrenticeHall,NewJersey.
- AliS.M.(1966):TheGeographyofPuranas,PeoplesPublishingHouse,Delhi.
- Amedeo,Douglas(1971):AnIntroductiontoScientificReasoninginGeography,JohnWiley, U.S.A.
- Bansal,S.C.(2010):HistoryofGeographicalthought(inHindi).
- Dikshit,Shreekant(2000):BhugoolikChintan,UdhavkeVikas,Varanasi.
- Dikshit,R.D.(ed.)(1994):TheArt&ScienceofGeographyIntegratedReadings,PrenticeHallofIndia,NewDelhi.
- Danieals,P.,Bradshow,M.,Shaw,D.AndSidaway,J.(2000):AnIntroductiontoHumanGeography.Issuesforthe21st Century.PrenticeHall,London.
- Dikshit,R.D.(2004):GeographicalThought.ACriticalHistoryofIdeas.Prentice-HallofIndia,NewDelhi.(inEnglishandHindi).
- Harvey,D.(1969):ExplanationinGeography.Arnold,London.

Course IV

AdvancedGeographyofIndia(Physical&Regional)

CourseContents:

Unit- I:Making of India through Geological Time : Geology, Structure and Relief of India,PhysicalDivisionsof India.

Unit II:DrainageSystemandWatersheds,HydrologyandWaterBalance, ClimateCharacteristics,MechanismofIndianMonsoon,ClimaticRegionsofIndia.

Unit III: Soil Resource & Conservation, Problem of Soil Erosion, Problem of deforestation,Forest Resources and their Conservation, Types of Soils and Natural Vegetation,ResourceRegionsof India.

Unit IV:DifferentSchemesofPhysiographicRegionalisationofIndia,theirbasesandComparativeStudies.

Unit V : Detailed case Studies of Uttarakhand Himalayas and Gangetic Plain with respect totheirGeology,Structure,Relief,DrainageandPhysiographicDivisions.

SuggestedReadings:

- CentreforScience&Environment:StateofIndia'sEnvironment,NewDelhi,1988.
- Deshpande,C.D.(1992):India:ARegionalInterpretationICSSR&NorthernBookCentre.
- Ganguly,S. and Neil,DeVotta(eds.)(2003):UnderstandingContemporary India.LynneReinnerPublishers,BoulderandLondon.
- Gole,P.N.(2001):NatureConservationandSustainableDevelopmentinIndia.RawatPublications,JaipurandNewDelhi.
- Khullar,D.R.(1968):India.AComprehensiveGeography.KalyaniPublishers,NewDelhi,2006.
- Bansal,S.C.(2011):India:AnAdvancedGeographyofIndia:MeenakshiPrakashan,Meerut(in Hindi).
- Krishnan,M.S.:GeologyofIndiaandBurma,4th Edition,HigginBothamsPrivateLtd.,Madras.
- Majid,Husain(2008):GeographyofIndia,TataMcGrawHillCompany,NewDelhi.
- Nag, P. and Gupta, S.S. (1992): Geography of India, Concept Publishing Company, NewDelhi.
- Singh,J.(2003):India:AComprehensiveandSystematicGeography,GyanodayaPrakashan, Gorakhpur.
- Singh,R.L.(Ed.)(1971):India:ARegionalGeography,NationalGeographicalSocietyofIndia ,Varanasi.

CourseV(Practical)
StatisticalTechniquesandCartography

CourseContents:

Unit- I:Types of profiles, Slope Analysis by different methods (Wentworth and Henry Raisz),Morpho-metricAnalysis.

UnitII : StandardDeviation,Mean,QuartilesOneandThree,Rankingmethods.Probability. TheoryofProbabilityGeographicalApplicationofstatisticaltechniques.

Unit III: Correlation – Spearman's and Carl Parsons Methods, Line of Regression, Chi-squaretest,binomialtest.

UnitIV : TechniquesofMappings
Drainagedensity,flowdiagrams,populationmapping.

UnitV : Fieldwork
Fieldworkanddataprocessingtechniques,samplingtests,dispersiondiagrams.

Note : Forwrittentestinall10questionsshallbegivenselecting02questionsfromeachunit.The students shall be attempting five questions selecting one question from each unit.Eachquestionshallbecarrying15marks.

ForExaminationBreak-UpofMarks-WrittenTest(3Hrs.)	75marks
Viva-voce	10marks
Recordwork	15marks

SuggestedReadings:

- DavidUnwin(1981):IntroductorySpatialAnalysis,Methuen,London.
- Gregory,S.(1978):StatisticalMethodsandtheGeographer,Longman,London.
- Hammond,R.andP.S.McCullagh(1974):QuantitativeTechniquesinGeography:AnIntroduction,ClarendanPress,Oxford.
- John,P.ColeandCuchlaineA.M.King(1968):QuantitativeGeography,JohnWiley,London
- JohnstonR.J.(1973):MultivariateStatisticalAnalysisinGeography,Longman,London.
- Koutsoyannis,(1973):TheoryofEconometrics,Mcmillan,London.
- MauriceYeats(1974):AnIndtroductiontoQuantitativeAnalysisinHumanGeography,McGrawHill,NewYork.
- PeterHaggett,AndrewD.Cliff&AllanFrey(1977):LocationMethods,Vol.IandII,EdwardArnold, London.
- Yadav, Hirilal (1998): Matratamak Bhaugool, Radha Publication, New Delhi.

SemesterII

CourseVI
ClimatologyandOceanography

CourseContents:

Unit- I : Nature and scope of climatology and its relationship with meterology. Compositionand structure of the atmosphere. Insolation and Heat Budget. Green House Effect.Distribution of Temperature and Pressure. Planetary wind system. JetStreamsandMonsoonmachanism.

Unit-II:Humidity and Precipitation. Acid Rain, Air Masses and Fronts, Origin of Cyclones,Anticyclones and Thunderstorms and their effects. Ocean atmospheric interaction: EINinoandLaNinaPhenomenon.

Unit- III:Climatic classification of Koeppen and Thornthwaite, Major –climates of the world-tropical,temperate,desertandmountainclimate.ClimaticchangesandGlobalwarming.

Unit- IV:Natureandscopeofoceanography.Distributionoflandand water. Surfaceconfiguration of the ocean floor. Submarine relief of the pacific. Atlantic and IndianOcean,CompositionofOceanicWater.DistributionofTemperatureandSalinity.

Unit-V : Circulation of Oceanic Water: Waves, Tides and Currents. Ocean Deposits: theirsourcesandkinds.Coralsandcoralreefs:Typesandtheoriesoftheirorigin.

SuggestedReadings(Climatology):

- Barry,R.G.andChorleyP.J.(1998):Atmosphere,WeatherandClimate.Routledge,Londonan dNewYork.
- Critchfield,J.H.(1993):GeneralClimatology,PrenticeHall,India,NewDelhi.
- Das,P.K.(1987):MonsoonsNationalBookTrust,NewDelhi.
- Fein,J.S.andStephens,P.N.(1987):Monsoons,WileyInterscience.
- IndianMet.Deptt.(1968):ClimatologicalTablesofObservatoriesinIndia,Govt.ofIndia.
- Lal,D.S.(1986):Climatology,ChaitanyaPublication,Allahabad.
- Lydolph,P.E.(1985):TheClimateoftheEarth,Rowman.
- Menon,P.A.(1989):OurWeather,P.B.T.NewDelhi.
- Peterson,S.(1969):IntroductiontoMeteorology,McGrawHillBook,London.
- Robinson,P.L.andHendersonS.(1999):ContemporaryClimatology,Henlow.
- Sharma,R.C.&MeeraVatal:OceanographyforGeographers.

Course VII

Laws,Models&TheoriesinGeography

CourseContents:

Unit- I:Development of Theoretical Geography, Definition and Meaning of Model, Paradigm,Theoryand Law,SystemsAnalysisinHumanGeography.

Unit II:Laws of Isostasy, Mountain Building, Buys Ballot's Law, Gravity Model, Centrifugal,CentripetalForces,CoriolisForce.Koeppen's,Thornthwait'sModel,Davisan dPenckCyclesofErosion.

Unit III:Locational Theories – Von Thunen's, Alfred Weber's, Isards, Losch, Central PlaceTheory.

UnitIV : CoppingIntensity,Crop–

Combination,ProductivityAnalysis.UnitV :

UrbanPrimacy,RankSizeRule,NearestNeighbourAnalysis.

SuggestedReadings:

- Baskin,C.W.(Translator):CentralPlacesinSouthernGermany,PrenticeHallInc.Englewood Cliffs New Jersey, 1966. Originally written by C.W. Christaller in GermanwithtitleDieZentralenOrteSudevtschLandin1933.
- Dikshit, R.D. (1996): Political Geography: A Contemporary Prespective, Tata McGrawHill,NewDelhi.
- Haggelt,P.,Andrew,D.etal(eds)(1979):LocationalModels,ArnoldHeinemann.
- Isard,W.(1956):MethodsofRegionalAnalysis,TheTechnologyPressofM.I.T.&JohnWiley &Sons,NewYork.
- King,L.J.(1986):CentralPlaceTheory,SagaPublications,NewDelhi.
- Losch,A.(1954):EconomicsofLocation,YaleUniversityPress,NewHeaven.
- Weber,Alfred(1957):TheoryofLocationofIndustries,ChicagoUniversityPress,Chicago.

Course VIII
AdvancedGeographyofIndia(Socio-economic)

CourseContents:

Unit- I:Agricultural system and technological problems of Indian agriculture, developments,agrarianreforms,greenrevolutionachievementsandshortcomings,needo f2nd greenrevolution, Agro-climatic regions of India. Regionalization of agriculture in India,cropcombinationregionsofIndia,foodproductionandpopulationgrowth.

Unit- II : Energy in India- Conventional and Non-conventional power resources, regional set-up of Hydel and Thermal Power stations, locational patterns and analysis of coal &petroleumresources,govt.policiesandconservationofenergyresources.

Unit- IIIAnalysis of Agro-Based (Sugar), Forest Based (Paper & Pulp) and Mineral basedindustries(Iron&Steel),IndustrialregionsofIndia,Modesoftransport,theirsignific anceanddevelopment,thepatternofforeigntrade.

Unit- IV: Socio-economic implications of explosive growth of population, distribution anddensity of population, population resource regions, trends of urbanization, urbanregions,populationproblemsandpolicies.

Unit- V:Basis of Economic Regionalization macro, meso and micro regional division of India,economic regionalization in India, Detailed study of the meso-regions of Great-Plains-theirinter-regionaldisparitieswithreferencetoagricultural.HumanResourcedevelopment.

SuggestedReadings:

- Brahmanand,P.R.et.,(1987):TheDevelopmentProcessofIndianEconomy,HimalayaPub. House.
- C.D.Deshpande,(1992):IndiaARegionalInterpretation,ICSSR,NewDelhi.
- Farmer,B.H.(1983):IntroductiontoSouthAsia.MethuenandCompanyLtd.andCompanyLtd. , London.
- Ganguly,S.AndNeil,DeVotta(eds.)(2003):UnderstandingContemporaryIndia.LynneRein nerPublishers.,BoulderandLondon.
- Gole,P.N.(2001):NatureConservationandSustainableDevelopmentinIndia.RawatPublicati ons,JaipurandNewDelhi.
- Johnson,B.L.C.(1983):DevelopmentinSouthAsia.PenguinBooks,Harmonsworth.

Course IX
RegionalPlanningandDevelopment

CourseContents:

Unit–I:Regionalconceptingeography,Concept,NatureandScopeofRegionalPlanning.,changing concept of the region from an inter-disciplinary view-point, concept ofspace,areaandlocationalattributes.

Types of region: Formal and functional; uniform and nodal, singlepurposeandcompositeregions, in the context of planning; regionalhierarchy.

Unit – II:Physicalregions,planningregionsofIndia,regionaldivisions according tovariationsinlevelsofsocio-economicdevelopment;specialpurposeregions-rivervalleyregions,metropolitanregions,problemregions– hillyregions,tribalregions,regionsofdroughtandfloods.

Unit – III:Approaches to Delimitation ofdifferenttypes ofregions and their utility inplanning.

Planningprocess– Sectoral, temporal and spatial dimensions; short-termandlongtermperspectivesof planning.

Unit – IV : Regional development strategies – concentration vs. dispersal, case studiesforplansofdevelopedanddevelopingcountries,RegionalplansofIndia.

Unit – V: Concept of Multi-level planning; decentralised planning; Panchayati Raj System,roleandrelationshipofPanchayatiRajInstitutions(VillagePanchayat,PanchayatSamitiandZilaParishad)andadministrativestructure(Village,BlockandDistrict).RegionaldevelopmentinIndia,problemsandprospects.

SuggestedReadings:

- Bhat,L.S.(1973):RegionalPlanninginIndia,StatisticalPublishingSociety,Calcutta.Bhat,L.S.etal.(1976):Micro-LevelPlanning:ACaseStudyofKarnalArea,Haryana, K.B.Publications,NewDelhi.
- Chandna,R.C.(2000):RegionalPlanning:AComprehensiveText.KalyaniPublishers.,NewDelhi.
- Chaudhuri,J.R.(2001):AnIntroductiontoDevelopmentandRegionalPlanningwithspecialreferencetoIndia.OrientLongman,Hyderabad.
- Friedmann,J.(1992):Empowerment:ThePoliticsofAlternativeDevelopment.Blackwell,CambridgeMAandOxford.

CourseX (Practical)
AdvancedCartography

CourseContents:

Unit-I : ElementsofCartography:

Definition,Scope and Development ofModernCartography since worldwarII.Definition and Classification of Map. Map as a Data Model. Cartographic Designs.Tools of Map Making. Lettering and Symbolisation of Maps. Techniques of MapReproduction.ComputerAssistedCartographicandAtlasMapping.

Unit-II : GraphicalPresentationofStatisticalData:

TypesofGraphsandDiagrams,ConstructionofClimograph,Ergograph,Hythergraph,Bandgraph,WindRose.

Unit-III:Compound Pyramid Diagram, Circle and Spherical Diagram, Dispersion and ScatterDiagrams.

Unit-IV : DistributionMaps:

TypesandMethodsofdrawingthematicmaps,choroschematic, chorochromatic,choropleth,Isopleth.

Unit-V : MapProjections:

Coordinate systems and map projections Properties, classification and choice of mapprojections. Mathematical construction of Sinusoidal, Mollweide, International andGall'sProjections.

Note: Forwrittentestinall10questionsshallbegivenselecting02questionsfromeachUnitfrom I to V. The students shall be attempting five questions selecting one questionfromeachunit.Eachquestionshallbecarrying15marks.

ForExaminationBreak-UpofMarks-WrittenTest(3Hrs.)	75marks
RecordWork	15marks
Viva-voce	10marks

SuggestedReadings:

- Cromely,RobertG.(1992):DigitalCartographyEnglewoodCliffs,NewJersey,Prentice-Hall, Inc.
- Dent,B.(1985):PrinciplesofThematicMapDesign,Reading,Massachusetts, Addision–WesleyPublishingCo.
- Dorling,D.andFairborn,D.(1997):Mapping,WaysofRepresentingtheWorld,Longman,Harlow.

SemesterIII

CourseXI
RecentIssuesinGeography

CourseContents:

Unit-I : RecentConceptualDevelopmentinGeography:
PhilosophicalIssue–
Positivism,Behaviouralism,Phenomenology,Idealsim,ExistentialismandHumanisticGeography,SpatialJustice,Radicalism&Postmodernism.

Unit-II : RecentMethodologicalDevelopmentinGeography:
Quantitative Revolution and use of Statistical Techniques. Use of Hardware andSoftware Technologies in data analysis and mapping, use of models and paradigms ingeography.

Unit-III :
UseofTechnologiesinGeography:RemoteSensingandGISandGPS.

Unit-IV : ScientificMethodsinGeographicalResearch:
HypothesisTesting,ProblemSolvingapproachinGeography,ProjectFormulationandProjectEvaluationTechniques.

Unit-V : RecentIssuesinIndianGeography:
PostColonialismandIndianGeography,Trends ofGeographicalResearchesinIndia,Prospects of Professional Opportunities in Geography, Future of Indian Geography,Problems,PerspectivesandProspects.

SuggestedReadings:

- Adams,P.,Steven,H.andKarel,T.(eds.)(2001):TextureofPlace.ExploringHumanisticGeographies.UniversityofMinnesotaPress,Minneapolis.
- Anderson,K.,Domosh,M.,Pile,S.andThrift,N.(eds.)(2003):HandbookofCulturalGeography.SagePublications,London.
- Barnes, T. and Gregory,D. (eds.) (1997):Readings inHuman Geography:The Poetics andPoliticsofInquiry.Arnold,London.
- Bunkše,E.V.(2004):GeographyandtheArtofLife.JohnHopkinsUniversityPress,Baltimore.
- Buttimer,A.(1971):SocietyandMilieuintheFrenchGeographicTradition.RandMcNally,Chicago.
- Daniels,P.,Bradshaw, M.,Shaw, D.and Sidaway, J.(2000):AnIntroductionto HumanGeography.Issuesforthe21stCentury.PrenticeHall,London.

CourseXII
InterdisciplinaryResearchMethodsandTechniques

CourseContents:

Unit- I:Conceptual Foundation of Research: Meaning and types of research, objectives andmotivationofresearch,conceptsofpureandappliedresearch,scientificapproachtogeographic research, Basic Components of Research, defining a research problem,constructionofresearchdesign,Hypothesisformulation.

Unit-II : Sampling Techniques and Selection of Geographic Variables: Aims of Sampling,Basic Components of Sampling Methods, Nature of Geographic Data, Continuousand discrete data. Level of measurements: various scales, data transformation; itsprocessandmethods.

Unit-III:Data Collection: methods of field observation, role of field methods in geographicstudies, Techniques for primary data collection, preparation of questionnaires. DatacollectionfromsecondarysourcesTabulationandDataAnalysis.

Unit-IV : Cartographic analysis of data. Techniques of data representation by quantitativemaps.HypothesisTesting.Basicprinciplesandproceduresofcorrelation,significanceofstatisticalanalysisandinterpretationofdata.

Unit-V:Drafting of the research report quantitative & qualitative interpretations, writingmanuals (Arranging themes, maintaining coherence, cross comparison concluding,referencingnotingetc.)Proofmarks&markedproof,sizescaleandtypesofreport,organisationanddesigningofreport,Evaluatingareport.

SuggestedReadings:

- Ahuja,R.(2001):ResearchMethods,RawatPublications,JaipurandNewDelhi.
- Bhattacharyya,D.K.(2005):ResearchMethodology,ExcelBooks,NewDelhi
- Blackburn,J.andHolland,J.(eds.)(1998):WhoChanges?InstitutionalisingParticipationinDevelopment.ITPublications,London.
- Blaxter,L.,Hughes,C. andTight,M.(1996):HowtoResearch.OpenUniversityPress,Buckingham.
- Mishra,R.P.:ResearchMethodology.
- Crang,Mike(1999):CulturalGeography.Routledge,London.
- Daniels,P.,Bradshaw,M.,et al.(2000): HumanGeography:Issuesfor the21stCentury.PrenticeHall,London,andPearsonPublishers.,Singapore.Indianreprint,2003.

Any oneof following{Either XIII (A)orXIII(B)}

CourseXIII (A)

AdvancedGeographyofUttarPradesh

CourseContents:

Unit-I: Locational Set-up of Uttar Pradesh in India and its changing map. Relief andPhysical Divisions, Structure, Drainage, Ground Water Resource, Soils andtheirtypes,ClimateandClimaticregionsandvegetativecover.

Unit-II : Problems Related to Over Utilisation of Natural Resources in Uttar Pradesh:UsarandSodicsoilsformationand soilerosion,Undergroundwaterscarcity,Depletion of forest cover and wild life, Surface Water Resource Utilities,DrinkingWaterandPowerShortage,Floodanddroughtaffectedparts.

Unit-III:Spatio Temporal Trends of Agricultural production, Development ofIrrigationalfacilitiesincludingcanalsanddams,AgriculturalProductivityandCrop-Combination regions, Power Generation and its distribution in differentsectorsofeconomy,Agro-Processingindustryandtheirproblemswithspecialreferencetosugarindustry.

Unit-IV:Human Resource Development in Uttar Pradesh: Demographic and Religiouscomposition(Density,Rural-UrbandistributionofPopulation,Sex-ratio,S/C/S/T population, Literacy and trend of urbanisation), occupational Structure andPovertyEradicationprogrammesinitiated.AccessibilityandTransportinfrastructuralgaps.

Unit-V:Planning for Balanced Development: Planning for sustainable developmentincluding health, education, drinking water, Emerging Political Issues andVotingBehaviourinGeneralelectionsandPolicyoftheStateGovernmentforBalancedregionaldevelopment.

SuggestedReadings:

- DespandeC.D.(1992):India-ARegionalInter-PretationICSSR,NorthernBookCentre,NewDelhi.
- SinghR.L.(ed.)(1971):India-ARegionalGeography,NationalGeographicalSociety,India,Varanasi.
- Tiwari,A.R.:GeographyofUttarPradesh,N&T.
- Tirtha,R.&GopalKrishna(1966):EmergingIndia,RawatPublications,Jaipur.
- KunduA.,RazaMoonis(1982):IndianEconomy:TheRegionalDimension,SpectrumPublishers,NewDelhi.
- Mamoria,C.B.:AdvancedGeographyofIndia.
- Bansal,S.C.:AdvancedGeographyofIndia(Hindi),MeenakshiPrakashan,Meerut.

CourseXIII(B)
AppliedGeography

CourseContents:

Unit-I:Nature, scope and content of applied geography; identification of problems ofinterdisciplinarynature(likeenvironment,resourcebase,resource-use,developmentanddisparity).

Unit-II:Issues related to variations in physical environment. Variations in land qualityaffecting agricultural productivity; environmental degradation, environmentaldisasterandenvironmentalmanagement.

Unit-III:Issuesrelatedtohumanresources;qualityvsnumbers;socialanddemographicissues: diversity and disparity; carrying capacity of the earth; human resourceuseandmanpowerplanning.

Unit-IV:Issues related to economy; spatial organization of economic activities (likeagriculture, industry, transport, trade etc.) spatial inequalities- causes andconsequences.

Unit-V:Environment and sustainable development with a focus on man-environmentrelationship. Reviewof policies related toplanning formulated for local,regionalandnationallevelwithspecialreferencetoIndia.

SuggestedReadings:

- Dohrs,F.E.andSommers,L.W.(eds.)(1967):IntroductiontoGeography,ThomasY.CrowellCo.,NewYork.
- Stamp,Dudley:AppliedGeography.
- HartshorneRichard(1959):PerspectiveontheNatureofGeography,RandMcNally&Co.,Chicago.
- Singh,R.L.:AppliedGeography.
- Harvey,David(1972):ExplanationinGeography,Edward-Arnold,London.
- Holt-Jensen,A.(1980):Geography:ItsHistoryandConcepts,Longmans.
- Husain,Majid(1984):EvolutionofGeographicalThought,RawatPublications,Jaipur(Latest EditionRevised).
- James,P.E.(1980):AllpossibleWorlds:AHistoryofGeographicalIdeas,SachinPublication,Jaipur(IndianReprint).
- Johnston,R.J.andClaval,P.(eds.)(1984):GeographySincetheSecondWorldWar,……Helm, London/BernesandNoble,Totowa,N.J.
- Jones,P.A.:FieldworkinGeography,Longmans.

CourseXIV
EcologyandEnvironment

CourseContents:

Unit-I:MeaninganddefinitionofEcologyandEnvironment,GeographyasHumanEcologyConceptual background. The Environment – meaning, structure and types, ManEnvironmentRelationship,PerceptionofEnvironment.

Unit-II:Ecology: meaning and its relation with Geography, Ecosystems: Kinds, structure andfunctions, energy flow, food chains, food webs and trophic levels, nutrient cycles,MajorBiomesof the World.

Unit-III:Geographical aspects of major environmental problems: Natural hazards-floods,drought,landslides,earthquakesandcyclones,Man-inducedhazards– Rapidurbanisation,transportdevelopment,Agriculturaldevelopment,Bigdams.

Unit-IV:Environmental Pollution – the concept and types of pollution, ecological impact ofpollution- the environmental concerns, the green house effects, ozone depletion,EnvironmentalPolicyandLegislation.

Unit-V:Ecological basis of environmental Management – Concept, need and approaches,Indian and International efforts for environmental conservation and managementsince1972.Environmentalproblemsandprogrammesin India.Environmentalimpact and assessment of controversial River Valley Projects like Tehri Hydro andNarmadaValley(SardarSarovar)Projects,NationalParks.

SuggestedReadings:

- Anjuneyulu,Y.(2004):IntroductiontoEnvironmentalScience.B.S.Publications,Hyderabad.
- Athavale,R.N.(2003):WaterHarvestingandSustainableSupplyinIndia.RawatPublications., Jaipur.
- Blaikie,P.,Cannon,T.andDavis,I.(eds.)(2004):AtRisk:NaturalHazards,PeoplesVulnerabilityandDisasters.Routledge,London.
- Bodkin,E.(1982):EnvironmentalStudies,CharlesE.MerrilPub.Co.,Columbus,Ohio.
- Chandna,R.C.(1998):EnvironmentalAwareness,KalyaniPublisher,NewDelhi.
- Eyre,S.R.andJones,G.R.J.(eds.)(1966):GeographyasHumanEcology,EdwardArnold,London.
- Gautam,A.(2007):EnvironmentalGeography,ShardaPustakBhawan,Allahabad.
- Khoshoo, T. N. (1981):EnvironmentalConcerns andStrategies. AshishPublishing House,NewDelhi.
- Kormondy,E.J.(1989):ConceptsofEcology,PrenticeHall.

Course XV(Practical)
AdvancedSurveying,RemoteSensingandGIS

CourseContents:

Unit –IPrismatic Compass Surveying (Mathematical Techniques for Closed Traversing),Interpolation of Contours by Indian Clinometer, Sextant measurement (Vertical andHorizontal), Telescopic Alidade, Dumpy Level (Simple & Differential Levelling,RiseandFallMethods,Theodolite.

Unit –IIAir Photos and Photogrammetry : Elements of Photographic System; types, scales,Calculation and Measurement of height of aircraft and ground coverage, resolution,radiometriccharacteristics,film,filters,aerialcameras,filmexposures,vertica lphotographs, relief displacement, image parallax, Numbering of Photographs AirPhoto interpretation : shape, size pattern, tone, texture, shadows etc. Photo Mosaicsandtheircomparisonwithtopographicalmaps.

Unit – IIIDefinition, types and scope of Remote sensing, Development of Remote sensing,stagesinremotesensingdataacquisition,electromagneticradiationandelectrom agnetic spectrum, black body radiation and radiation laws, Interaction ofEMRwithEarth'ssurfacefeatures,Roleofatmosphereinremotesensing.Typesandsalie nt characteristicsoforbitalplatforms,typesand geometry sensors,sensorsresolutionsandapplication,remotesensingdataproducts,Indentingofre motesensingdatainIndia.

Unit - IVDefinition and development of GIS, computer environment for GIS, Spatial Data :Elementsofspatialdata;qualityanderrorvariations-rasterandvectordatastructures,DatabaseManagementSystems:andspatialmodeling-outputformatandgeneration.,GISApplication:GISasaDecisionSupportSystem-expert.GISinLandInformationSystem,UrbanManagement,EnvironmentalManageme ntandEmergencyResponseSystem.UseofGPSindatagenerationandmapping.

Note: AGeographicalSurveyCampofnotlessthan10daysdurationindifferentareaotherthan of college premises of India will be arranged to acquaint students with theadvanced surveying techniques and the spot study of aerial photographs & satelliteimageries.Students are required to submit survey camp report containing not morethan 10 pages and supported by 5 maps prepared during survey camp.There will beone teacher and one supporting staff on every 10 students group of guiding thestudents.T.A. & D.A. will be paid by the college concerned to the teaching andsupportingstaffmembersaccompanyingthestudentsduringsurveycamp.

ForpurposeofexaminationtwosurveyingexercisesfromUnit-Iwillbegiventoeachgroupofnotmorethan2students.Theseexerciseswillbeof3hoursduration.

There will be a written test of 3 hours duration for rest of units-II, III & IV. Studentswillhavetoattempt3questionsoutof6questions(2fromeachUnit).

Thedistributionofmarksshallbefollows:-

(1)	Twosurveyingexercises	30Marks
(2)	WrittenTest	30Marks

(3) SurveyCampReport 20Marks
(4) SessionalRecordandVivaVoceTest 10+10=20Marks
(Studentsthosedonotattendsurveycamp,theirevaluationinpracticalcourseshouldbedonein80Marks)
.

SuggestedReadings:

- Barrett,E.C.andCurtisL.F.:FundamentalsofRemoteSensingandAirPhotoInterpretation.
- Campbell,J.:IntroductiontoRemoteSensing.
- Luder,D.:AerialPhotographyInterpretation:PrinciplesandApplication.
- Star,J.andJ.Estes:GeographicInformationSystems:AnIntroduction.
- FraserTaylorD.R.:GeographicInformationSystems.
- BurroughP.A.:PrinciplesofGeographicInformationSystemsforLandResourcesAssessmen t.
- Campbell,J.B.(2002):IntroductiontoRemoteSensing.5th edition.TaylorandFrancis,London .
- Cracknell,A.andHayes,L.(1990):RemoteSensingYearBook,TaylorandFrancis,London.
- Curran,P.J.(1985):PrinciplesofRemoteSensing,Longman,London.
- Deekshatulu,B.L.andRajan,Y.S.(ed.)(1984):RemoteSensing.IndianAcademyofScience, Bangalore.
- Floyd,F.andSabins,Jr.(1986):RemoteSensing:PrinciplesandInterpretation,W.H.Freeman, NewYork.
- Guham,P.K.(2003):RemoteSensingforBeginners.AffiliatedEast-WestPressPrivateLtd.,NewDelhi.
- Hallert,B.(1960):Photogrammetry,McGrawHillBookCompanyInc.,NewYork.
- Harry,C.A.(ed.)(1978):DigitalImageProcessing,IEEEComputerSociety,California
- Hord,R.M.(1982):DigitalImageProcessingofRemotelySensedData,AcademicPress,New York.
- Leuder,D.R.(1959):AerialPhotographicInterpretation:PrinciplesandApplication.McGra wHill,NewYork.
- Lillesand,T.M.andKiefer,R.W.(2000):RemoteSensingandImageInterpretation.4th edition. JohnWileyandSons,NewYork.
- Nag,P.(ed.)1992:ThematicCartographyandRemoteSensing,ConceptPublishing.Compan y,NewDelhi.

SemesterIV

Anyoneofthefollowinggoups:
Group-A

CourseXVI(A)
PopulationGeography

CourseContents:

Unit- I : Population Geography: Scope and Objectives, development of Population Geographyasafieldofspecialisation-PopulationGeographyandDemography-sourcesofpopulationdata,theirlevelofreliability,andproblemsofmappingofpopulationdata.

Unit-II:Population distribution: density and growth – theoretical issues, Classical and modern theories in population distribution and growth, World patterns and their determinants,India,populationdistribution,densityandgrowthprofile,Conceptsofunderpopulationandoverpopulation.

Unit-III:Population composition: age and sex, family and households, literacy and education,religion,casteandtribes,ruralandurban,urbanisation,occupationalstructure,populationcompositionof India.

Unit-IV:Population dynamics: Measurements of fertility and mortality, migration, national andinternationalpatterns,India'spopulationdynamics,DemographicResearchMethods.

Unit-V:Population and development: population-resource regions and levels of population andsocio-economic development, population policies in developed and less developedcountries,HumanDevelopmentIndexanditscomponents,India'spopulationpolicies,populationandenvironment,implicationsforthefuture.

SuggestedReadings:

- Bilasborrow,RichardEandDanielHogan(1999):PopulationandDeforestationintheHumidTropics,InternationalUnionfortheScientificStudyofPopulation,Belgium.
- Bogue,D.J.(1969):PrinciplesinDemography,JohnWiley,NewYork.
- Bose,Ashishet.al.(1974):PopulationinIndia'sDevelopment(1947-2000):VikasPublishingHouse,NewDelhi.
- CensusofIndia(1991):India:AStateProfile.
- Chandna,R.C.(2000):GeographyofPopulation,Concept,DeterminantsandPatterns,Kalyani Publishers,NewDelhi.
- Clarke,JohnI.(1973):PopulationGeography,PergamonPress,Oxford.
- Crook,Nigel(1997):PrinciplesofPopulationandDevelopment,PergmonPress,NewYork.

Course XVII (A)
GeographyofRuralSettlements

CourseContents:

Unit-I : Nature, scope, significance and development of rural settlement geography. Approachestoruralsettlementgeography.Rural-urbancontinuum

Definitionandcharacteristicsofruralsettlementsinthefringeareasandsparselysettledareas.

DistributionofRuralsettlements:size and spacing ofruralsettlements.NearestNeighbourAnalysis.

Unit-II:Types, forms and Patterns of rural settlements: cause and effect, Classification of ruralsettlements, Rural service centres, their nature, hierarchy and functions, rural-urbanfringe–structure,characteristicsandfunctions.

Unit-III:Socialissuesinruralsettlements:poverty,housingandshelter, depriation andinequality,empowermentofwomen,healthcare,rural-urbaninteraction.

Unit-IV:Environmentalissuesinruralsettlements:accesstoenvironmentalinfrastructure,water supply,sanitation,drainage,healthhazards.

Unit-V:Culturallandscapeelementsinruralsettlementsindifferentgeographicalenvironments withspecialreferencetoIndia;Housetypesandfieldpatterns,Origin,evolution,size,socio-spatialstructureofIndianvillages.RuraldevelopmentplanninginIndia.

SuggestedReadings:

- Alam,S.M.et.al.(1982):SettlementSystemofIndia,OxfordandIBHPublicationCo.,NewDelhi.
- Brock,J.O.M.andWelb,J.W.(1978):GeographyofMankind,McGrawHill,London.
- Chisholm,M.(1967):RuralSettlementsandLandUse,JohnWiley,NewYork.
- Clout,H.D.(1977):RuralGeography,Permajon,Oxford.
- Daniel,P.andHopkinson,M.(1986):TheGeographyofSettlement,Oliver&Byod,Edinburg.
- Grover,N.(1985):RuralSettlement–ACulturalGeographicalAnalysis,Inter-IndiaPublication,Delhi.
- Hudson,F.S.(1976):AGeographyofSettlement,MacDonald&Evans,NewYork.

CourseXVIII(A)
UrbanGeography

CourseContents:

Unit- I:Nature and scope of urban geography, different approaches and recent trends in urbangeography, attributes of urban places during ancient, medieval and modern period,Bases and process of urbanization and development, Urban growth and theories.CentralPlaceTheoryofChristallerandLosch.TheoriesofPerrouxandBoudeville.

Unit-II:Urban economic base: Basic and non-basic functions, input-output models, concept ofdualism, colonial and postcolonial structure, metropolitan city and changing urbanfunction;roleofinformalsectorinurbaneconomy.Functionalclassificationoftowns. Classificationofurbansettlementsonthebasisofsizeandfunctionanditsmethods.

Unit-III:Organization of urban space: urban morphology and landuse structure, city core,commercial,industrialandresidentialarea;core-countryvariations;city-regionrelations,modernurbanlandscape;morphologyofurbansettlementsanditscomparison with western urban settlements; urban expansion, umland and periphery,UrbanPrimacy,RankSizeRule.

Unit-IV:Contemporaryurbanissues:urbanpoverty,urbanrenewal,urbansprawl,slums;transportation, housing, urban infrastructure; environmental pollution; air, water, noise,solidwaste,urbancrime.

Unit-V: Urban policy and planning, development of small and medium sized towns, cityplanning,greenbelts,gardencities,urbanpolicy,contemporaryissuesinurbanplanning globalizationandurbanplanningintheThirdWorld.ContributionsofIndianscholarstothestudiesofurbansettlements.

SuggestedReadings:

- Alam,S.M.(1964):Hyderabad–SecunderabadTwinCitiesAsiaPublishingHouse,Bombay.
- Berry,B.J.L.andHorton,F.F.(1970):GeographicPerspectivesonUrbanSystems,PrenticeHall,EnglewoodChiffs,NewJersey.
- Bansal,S.C.:UrbanGeography(English&Hindiboth),MeenakshiPrakashan,Meerut.
- Carter(1972):TheStudyofUrbanGeography,EdwardArnoldPublishers,London.
- Chorley,R.J.OHaggettP.(ed.)(1966):ModelsinGeography,Methuen,London.
- Dickinson,R.E.(1964):CityandRegion,Routledge,London.
- Dwyer,D.J.(ed.)(1971):TheCityasaCentreofChangeinAsia,UniversityofHongKongPress, Hongkong.
- Gibbs,J.P.(1961):UrbanResearchMethods,D.VanNostrandCo.Inc.Princeton,NewJersey.
- Hall,P.(1992):UrbanandRegionalPlanning,Routledge,London.

CourseXIX(A)
GenderGeography

CourseContents:

Unit-I:Growthandevolutionofthisdiscipline;itsconnotation;traditionalconceptofinterdependencebetweenmenandwomen;RegionalPatternsofSexRatio&Determinants.

Unit-II:Gender based demographic structure; infant mortality rates between boys and girls;maternal mortality rate; female infanticide; Gender and Longevity Gap. RegionalProfileofgenderbasedStructure.

Unit-III:Participation ratio in Economic and Social Activities; multiple role of women in land,water and forest resource management; involvement of women in household works,agriculture, mining, construction, industry, service and informal sectors; health-caredeliverer.

Unit-IV:RegionalinequalityinSocioeconomicdevelopment.GenderGapsinSocialandPublicLife: Education, wage differentials in economic activities, health care and nutrition,participation in politics and enfranchisement. Patterns of health care : a RegionalProfile.

Unit-V:Empowerment of women atvarious levels Village to Parliament with education,economic opportunities, access to reproductive health services, involvement in decisionmakingprocessesinthearenasofdevelopmentandenvironmentalmanagement.

SuggestedReadings:

- Boserup,E.(1989):Women'sRoleinEconomicDevelopment,Earthscan,London.
- Dankelman,I.&Davidson,J.(1989):WomenandEnvironmentintheThirdWorld,Earthscan,London.
- Deblig,H.J.(1996):HumanGeography-Culture,SocietyandSpace(5th ed.),JohnWiley,NewYork.
- Haraway,D.(1991):Simians,CyborgsandWomen-TheReinventionofNature,Routledge,NewYork.
- Koblinsky,M.et.al.(eds.)(1993):TheHealthofWomen–AGlobalRespective,WestviewPress, Boulder.
- Lee,D.(1988):WomeninGeography-AComprehensiveBibliography,BocaRaton,Florida.
- Lewis,R.(1995):Race,FeminityandRepresentation,Routledge,NewYork.
- Momsen,J.H.&Townsend,J.(eds.)(1987):GeographyofGenderintheThirdWorld,Albany,NewYork.
- Montagu,A.(1964):Man'sMostDangerousMyth-theFallacyofRace,Cleveland.

Group-B

Course XVI(B)
AgriculturalGeography

CourseContents:

Unit-I:Nature,scope,significanceand development of agricultural geography.Approaches to the study of agricultural geography: Sources of agriculturaldata.

Unit-II:Determinantsofagriculturallanduse-Physical,cultural.Landholdingandlandtenuresystems.Selectedagriculturalconceptsandtheirmeasurements;croppingpattern,cropconcentration,intensityofcropping,degreeofcommercialization,diversificationandspecialization,efficiencyandproductivity, crop combination regions and agricultural development. GreenRevolution-itsimpactandconsequences.

Unit-III : Theories of agricultural location based on several multi-dimensioned factors:Von Thunen's theory of agricultural location and its recent modifications;Whittlesey'sclassificationofagriculturalregions;landuseandlandcapability.

Unit-IV : Agriculture in India- Land use and shifting cropping pattern. Regional patternof productivity in India. Green Revolution, White Revolution, Food deficit andfoodsurplusregions;nutritionalindex.SpecificproblemsinIndianagricultureandtheirmanagementandplanning.AgriculturalPolicyinIndia.

Unit-V : Contemporary issues; Food, nutrition and hunger, food security, drought andfoodsecurity,foodaidprogrammes;environmentaldegradation,roleofirrigation, fertilizers, insecticides and pesticides, technological know-how.Employment in the agricultural sector: landless labourers, women, children,occupational health and agricultural activities. Land reforms, land use policyandplanning.

SuggestedReadings:

- Bayliss Smith, T.P. (1987): The Ecology of Agricultural Systems. Cambridge UniversityPress,London.
- Berry,B.J.L.et.Al.(1976):TheGeographyofEconomicSystems.PrenticeHall,NewYork.
- Brown,L.R. (1990):TheChanging WorldFood Prospects- The Nineties andBeyond.WorldWatchInstitute,WashingtonD.C.
- Dyson,T.(1996):PoupulationandFood-GlobalTrendsandFururesProspects.Routledge,London.
- Gregor,H.P.(1970):GeographyofAgriculture.PrenticeHall,NewYork.

CourseXVII (B)
GeographyofManufacturing

CourseContents:

Unit-I:Nature, scope and recent developments, elements and factors of localization ofmanufacturingindustries;centralizationanddecentralizationofindustrialenterprises.

Unit-II : Theories and models of industries location: Weber, Losch, Isard and Hoover.Modernrefinementstoleast-cost-theory;Criticalreviewandapplicationofindustriallocationtheories.:

Unit-III:Distributionandspatialpatternofmanufacturingindustries-IronandSteel,energygoodsandautomobiles;textiles,chemicals,petro-chemical,hardwareandsoftwareindustries.Methodsofdelineatingmanufacturingregions;majormanufacturingregionsof the world.

Unit-IV:Methodsof measuring the spatial distribution of manufacturing industries:location quotient, co-efficient of geographic association, index of concentration;casestudiesonapplicationofthesemethods.

Unit-V : Environment degradation caused by manufacturing industries Industrial hazardsandoccupationalhealth.Impactofmanufacturingindustriesoneconomicdevelopment; Role of globalisation on manufacturing sector; shifting of industriesanditsimpactonthe urbanfringe;changingindustrialpolicy-needforintegratedindustriesdevelopment.

SuggestedReadings:

- Alexander,J.W.(1988):EconomicGeography,PrenticeHall,EnglewoodCliffs.
- Alexanderson,D.(1967):GeographyofManufacturing,PrenticeHall,Bombay.
- Hoover,E.M.(1948):TheLocationandSpaceEconomy,McGrawHill,NewYork.
- Isard, W.(1956): Methods of Regional Analysis, The Technology Press of M.I.T. & JohnWiley&Sons,NewYork.
- Miller,E.(1962):AGeography ofManufacturing,PrenticeHall,EnglewoodCliffs,NewJersey.
- Weber,Alfred(1957):TheoryofLocationofIndustries,ChicagoUniversityPress,Chicago.

CourseXVIII(B)
GeographyofTransport

CourseContents:

Unit-I:Nature, scope, significance and development of Transport Geography, Factorsassociated with the development of transport system: physical, economic,social,culturalandinstitutional;economic,technologicalandregionald evelopmentandtransportdevelopment.

Unit-II:Charateristics and relative significance of different modes of transport:railways,roads,airwaysandwaterways,pipelinesetc.

Unit-III:Structure- Accessibility and Flow models; network structure, graph theoreticmeasures, measurement of accessibility, models of network change. Linearprogramming and gravity models,. Theories related to freight rate structure,basesofspatialinteraction,complementaryinterveningopportunityandt ransferability.

Unit-IV : Pattern of movement: the type, patterns of movement and transport modes,simple model of interaction, transportation network: the functions, pattern ofmovement,movementgeometry,transportdevelopment.

Unit-V: Transport policy and planning transport development in developing countries,urban, transportation: growth and problems of urban transportation,. transportandenvironmentaldegradation;vehicularpollutionandcongestion,alter natives to transport system in mega cities of India, National HighwayDevelopmentandTransportPlanninginIndia.

SuggestedReadings:

- ChorleyR.J.&HaggettP.(1967):ModelsinGeographyMethuen&Co.London.
- Hurst,M.E.(ed.)(1974):TransportationGeography,McGraw-Hill.
- Hagget,FandChorley,R.J.(1968):NetworkAnalysis',EdwardArnold,London.
- Hay,A(1973):TransportEconomy,MacMillan,London.
- Hoyle,B.S.(ed.)(1973):TransportandDevelopment,MacMillan,London.
- Raza,M.andAgrawalY.P.(1985):TransportGeographyofIndia,Concept,NewDelhi.
- RobinsonH&BamfordC.G.(1978):GeographyofTransportMacdonald&Evans.London.
- Taffe,E.J. &Gauthier (Jr.)H.L.(1973):GeographyofTransportation,Prentice-Hall,EnglewoodCliffs,N.J..
- UllmanE.L.(1957):AmericanCommodityFlowUniversityofWashingtonPress.
- WhiteH.P.andSenior,M.L.(1983):TransportGeographyLongman,London.

CourseXIX (B)
GeographyofTourism

CourseContents:

Unit-I: Basics of tourism:, Definition of tourism; Factors influencing tourism:historical,natural,socio-culturalandeconomic;motivationfactorsforpilgrimages:leisure,recreation;elementsoftourism,tourismasanindustry.

Unit-II:Geography of tourism:- its spatial affinity; areal and locational dimensionscomprisingphysical,cultural,historicalandeconomic;Tourismtypes: cultural, eco- ethnocoastal and adventure tourism, national and internationaltourism;globalizationandtourism.

Unit-III:IndianTourism:regionaldimensionsoftouristattraction;evolutionoftourism, promotionoftourism.

Unit-IV:Infrastructureandsupportsystem–accommodationandsupplementaryaccommodation; other facilities and amenities; Tourism circuits-short andlongerdetraction–Agenciesandintermediacies–Indianhotelindustry.

Unit-V : Impacts of tourism: physical, economic and social and perceptional positiveand negative impacts; Environmental laws and tourism – Current trends,spatial patterns and recent changes; Roleof foreign capital & impact ofglobalizationontourism.

Project report on relevant topics such as impact of eco-tourism, CulturaltourismandHistoricaltourism.

SuggestedReadings:

- BhatiaA.K.(1996):TourismDevelopment:PrinciplesandPrctices. SterlingPublishers,NewDelhi.
- Inskeep.E(1991):TourismPlanning:AnIntegratedandSubstainableDevelopmentApporach, VanNostrandandReinhold,NewYork.
- KaulR.K.(1985):DynamicsofTourism&Recreation.Inter-India,NewDelhi.
- KaurJ.(1985):HimalayanPilgrimages&NewTourismHimalayanBooks,NewDelhi.
- LeaJ.(1988):TourismandDevelopmentItheThirdWorld,Routledge,London.
- MiltonD.(1993):GeographyofWorldTourismPrentice.Hall,NewYork.
- PeaceD.G.(1987):TourismTo-day:AGeographicalAnalysis,Harlwo,Longman.
- Robinson,H.A(1996):AGeographyofTourism.MacdonaldandEvans,London.
- SharmaJ.K.(ed.)(2000):TourismPlanningandDevelopment-Anewperspective,KanishkaPublishers,NewDelhi.

Group-C

CourseXVI(C)
CulturalGeography

CourseContents:

Unit- I:Nature and development of cultural geography: Philosophical bases of culturalgeography, cultural geography in the realm of social sciences. Understandinganditsstructureandprocess:geographicalbasesofsocialformations:contributionofculturalgeographytosocialtheorypowerrelationsandspace.

Unit- II : Evolution of socio-cultural regions of India: bases of social region formation:roleofrace,caste,ethnicity;religionandlanguages:socialtransformationandchange in India. Cultural diversity and regionalization in India. Concepts ofsocialwell-being,physicalqualityoflife,humandevelopmentculturaldiversity.

Unit- III:Introduction:DefinitionandScopeofculturalgeography:Culturalelementandcomponentsofculture;convergenceanddivergenceprocesses;culturalchanges;perception,behaviouralismandculturalrelativism.

Unit- IV: Geography of ethnic groups and tribal groups. Re ligion and its diffusion;diffusion of ethnictraitsin world as well as Indiaethniclandscapeandeconomy of the area, Diffusion in folk geography: Cultural landscape andculturalecologyinfolkgeography.

Unit- V:Patterns of livelihood: various economic activities & cultural adaptations;agriculture,industrializationandmodernizion,technologicalchangesandtheirgeographicimplications,patternofdifferentsocieties.Socio-culturalpalnninginIndia.

SuggestedReadings:

- Ahmad,Aijazuddin(1999):SocialGeography,RawatPublication,NewDelhi.
- Broek,J.C.andWebb,J.W.(1978):AGeographyofMankind,McGrawHill,NewYork.
- Crang,Mike(1998):CulturalGeography,Routledgepublications,London.
- DeBlij,H.D.:HumanGeography,JohnWileyandSons,NewYork.
- DrezeJean,AmartyaSen(1996):EconomicDevelopmentandSocialopportunity,OxfordUniversityPress,NewDelhi.
- Dubey,S.C.(1991):IndianSociety,NationalbookTrust,NewDelhi.
- Gregory,D.andJ.Larry(eds.)(1985):Socialrelationsandspatialstructures,McMillan.
- Harmandorf,(1989):TribesofIndia:TheStruggleforsurvival,OxfordUniversityPress,Delhi.

Course XVII (C)
PoliticalGeography

CourseContents:

Unit-I:Nature,scope,subjectmatterandrecentdevelopmentinpolitical geography;approachestostudy,majorschoolsofpoliticalthought.

Unit-II:GeographicElementsand the State: Physical Elements; Human elements;Economicelements;Politicalgeographyandenvironmentinterface.

Unit-III:Themes in Political Geography: State, Nation, Nation-State and Nation-building,Frontiersandboundaries,Colonialism,decolonizatiojn,Neocolonialism,Federalismandotherformsofgovernance.ThechangingpatternsofWorldPowers,Perspectivesoncore-peripheryconcept,Conflictsandcooperation.

Unit-IV:Geopolitical significance of Indian Ocean: Political geography of any one of thefollowingregions:SAARCRegion,South-EastAsia,WestAsia,EastAsia,

Unit-V:Political geography of contemporary India with special reference to: The changingpolitical map of India, centripetal & centrifugal forces; stability & instability;Interstate issues (like water disputes & riparian claims) and conflict resolutionsinsurgency in border states; Emergence of New States; Federal India: Unity inDiversity.

SuggestedReadings

- Alexander,L.M.(1963):WorldPoliticalPatternsRanMcNally,Chicago.
- DeBlij,H.J.andGlassner,Martin(1968):SystematicPoliticalGeography,JohnWile,NewYork.
- Dikshit,R.D.PoliticalGeography(1996):AContemporaryPerspective.TataMCGrawHillNew Delhi.
- Dikshit,R.D.Politicalgeography(1999):ACentryofprogress,Sage,NewDelhi.
- Sukhwal,B.L.(1968):ModernPoliticalGeographyofIndiaSterlingPublishers,NewDelhi.
- Taylor,Peter(1985):PoliticalGeographyLongman,London.
- FisherCharlesA.(1968):EssaysinPoliticalGeography,Mehthuen,Landon.
- PoundsN.J.G.(1972):PoliticalGeography.McGrawHill,NewYork.
- JohnR.Short(1982):AnintroductiontoPoliticalGeographyRoutledge,London.
- Moddie,A.E:GeographyBehindPoliticsHutchinson,London,Latestedition.
- Prescott.J.R.V.:TheGeographyofFrontiersandBoundariesAldine,Chicago.
- DeshpandeC.D(1992):India-A-RegionalInterpretationNorthernBookCentre,NewDelhi.
- PnanikkarK.M.(1959):GeographicalFactorsinIndianHistory:2Vols.AsiaPublishingHouse,Bombay.

CourseXVIII(C)
AdministrativeGeography

CourseContents:

Unit-I:AdministrativeGeography:definition,subject matter, and significance-AdministrativeGeographyasthestudyofadministrativeareasandareaadministration; Geography and Public Administration; Administrative GeographyandModernPoliticalGeography.

Unit-II:AdministrativeAreas:evolution,changeandperiodic reforms, types ofadministrativeareas-generalpurpose,specialpurpose. Structuralattributesofadministrativeareas-hierarchy,size,shapeandheadquarters.

AreaAdministration:GeographyofPublicpolicy–formulation,implementationand impact; Geography of public finance – revenue, expenditure and balance;Administrativesystem–theworldpattern.

Unit-III : Spatial Organisation of Administration and the Development Process: Measuresofspatialqualityofadministrativeareas;measuresofdevelopmentlevel;relationship between spatial quality and development level of administrativeareas. Administrative Geography of select Countries: India, U.S.A. Russia andUnitedKingdom.

Unit-IV:Concept of Multi-level planning in India – Top down and bottom-up approach/Decentralised planning; Panchayati Raj role and relationship of Zila Parishad,Panchayat Samithi and Village Panchayat, Relationship with the administrativeframework.CasestudyfromselectedStatesinIndia

Unit-V:The administrative framework and the environment: Inter relationship and impactassessment.

SuggestedReadings:

- Alderfer,H.F.(1964):LocalGovernmentinDevelopingCountries,McGraw-Hill,NewYork.
- Bennett.R.J.(1980):GeographyofPublicFinance,Methuen,NewYork.
- Coppack,J.T.andJ.R.D.Sewell(eds.)(1976):SpatialDimensioninPublicPolicy,Pergamon.Press,Oxford.
- DeshpandeC.D.(1992):India-ARegionalInterpretaionICSSR,NorthernBookCentre,NewDelhi.
- Fesler,J.W.(1949):AreaandAdministration,UniversityofAlabamaPress,Alabama.
- GovernmentofIndia,PlanningCommission,NewDelhi(1984):ReportoftheWorkingGrouponDistrictPlanning2volumes,NewDelhi.
- Suryakant(1988),AdministrativeGeographyofIndia,RawatPublication,Jaipur.

CourseXIX(C)
GeographyofHealth

CourseContents:

Unit-I : Nature, scope and significance of geography of health Development of this areaofspecialization;itsdistinctionfrommedicalscience.

Unit-II : Geographicalfactorsaffectinghumanhealthanddiseasesarisingfromthem,viz
- (i) Physicalfactors-relief,climate,soilsandvegetation.
- (ii) Socialfactors-populationdensity,literacy,socialcustomsandpoverty.
- (iii) Economicfactors-foodandnutritionoccupationandstandardofliving
- (iv) Environmentalfactors-urbanizationandcongestion,water,airandnoisepollutionandsolidwaste.

Unit-III:Classificationofdiseases:genetic,communicableandnon-communicable,occupationalanddeficiencydiseases.WHOclassificationofdiseases,PatternofWorlddistributionofmajordiseases.

Unit-IV:Ecology,etiologyandtransmission of major diseases: cholera, malaria,tuberculosishepatitis,leprosy,cardiovascular,cancer,AIDSandSTDS.Diffusionofdiseasesandcausesforthesame.Deficiencydisordersandproblemsof mal-nutritioninIndia.
- (i) internationallevel-WHO,UNICEF,RedCross
- (ii) Nationallevel-GovernmentandNGOs,

Unit-V Health Care Planning and Policies ; availability, accessibility and utilization ofhealth care services; Primary health care; Inequalities in health care services inIndia;familywelfare,immunization,nationaldiseaseeradication,andHealthforAll Programmes.

SuggestedReadings:

- Banerjee,B.andHazraJ.(1980):Geo-EcologyofCholerainWestBengal,UniversityofCalcutta,Calcutta.
- Cliff,A.andHaggett,P.(1989):AtlasofDiseaseDistribution.BasilBlackwell,Oxford.
- Digby,A.andStewart,L.(eds.)(1996):Gender,HealthandWelfare.Routledge,NewYork.
- Hazra,J.(ed.)(1997):HealthCarePlanninginDevelopingCountries.UniversityofCalcutts,Calcutta.
- LearmonthA.T.A.(1978):PatternsofDiseaseandHunger.AStudyinMedicalGeography.David &Charles,Victoria.
- May,J.M.(1961):StudiesinDiseaseEcology,HafnerPub.,NewYork.
- May,J.M.(1959):EcologyofHumanDisease,M.D.Pub.,NewYork.
- May,J.M.(1970):TheWorldAtlasofDiseases,Nat.BookTrust,NewDelhi.

Group-D

CourseXVI(D)
Biogeography

CourseContents:

Unit- I:Scope and development of Biogeography. Environment, Habital and Plant-animalassociation,biometypes.

Unit- II : Elements of plant geography, distribution of forests and major communities.Plant successions in newly formed landforms. Examples from flood plains andglacialforefields.

Unit-III : ZoogeographyanditsEnvironmentalRelationship.

Unit- IV : Palaeobotanical and Palaeo climatological records of environmental change inIndia.

Unit-V : NationalForestPolicyofIndia.ConservationofBioticResources.

SuggestedReadings:

- Agarwal,D.P.(1992):ManandEnvironmentinIndiaThroughAges,Book&Books.
- Bradshaw,M.L.(1979):EarthandLivingPlanet,ELBSLondon.
- Cox,C.D.andMoore,P.D.(1993):Biogeography:AnEcologicalandEvolutionaryApproach5th edn.Blackwell.
- Gaur,R.(1987):EnvironmentandEcologyofEarlyManinNorthernIndiaR.B.PublicationCorporation.
- Hoyt,J.B.(1992):ManandtheEarth,PrenticeHall,U.S.A.
- Huggett.R.J.(1998):FundamentalsofBiogeography.Routledge,U.S.A.
- IIlies,J.(1974):IntroductionofZoogeography,Mcmillan,London.
- Khoshoo,T.N.andSharma,M.(eds.)(1991):IndianGeosphere-BiosphereHar-AnandPublication,Delhi.
- Lapedes,D.N.(ed.)(1974):EncyclopediaofEnvironmentalScience,McGrawHill.
- MathurH.S.(1998):EssentialsofBiogeography,AnujPrinters,Jaipur.
- Pears,N.(1985):BasicBiogeography.2nd edn.Longman,London.
- Simmon.I.G.(1974):Biogeography,NaturalandCultrual,Longman,London.
- Tivy,J.(1992):Biogeography:AstudyofPlantsinEcosphere3rd edn.OliveranBoyd,U.S.A.

Course XVII (D)
GeographyofWaterResources

CourseContents:

Unit-I : Water as a focus of geographical interest, inventory and distribution of world'swater resources (surface and subsurface); world hydrologic cycle: quantitativeestimates; water storages. Glaciers, river channels, lakes and reservoirs; soilmoisture,groundwater.

Thebasichydrologiccycle:precipitation:potential,evapotranspirationandinterceptionlosses;runoff

Unit-II : Water demand and use: methods of estimation – agricultural, industrial andmunicipalusesofwater.

Agricultural use of water: estimation of crop – water requirement; soil-water-croprelationships;waterbalanceanddrought;majorandminorirrigation:methodsofdistributionofwatertofarms;waterharvestingtechniques,soilwaterconservation.

Irrigation – water logging, salinity and alkalinity of soil – over exploitation ofground water, land subsidence, saline water intrusion into the coastal aquifers.Water quality parameters, water pollution-river and ground water – floride andarsenic

Unit-III:Industrial use of water: methods of estimation; demand for water in the industrialsectorof India.
Municipal use of water: general trends in water supply to the urban and ruralcommunitiesinIndia,Internalnavigation,hydelpowerandrecreation.

Unit-IV:Problemsofwaterresource management xxxxxxxxxxxxxx/frequency,xxxxxxxxxxx and non structural adjustment of flood hazards, embankments,reservoirs,channelimprovement,soilconservation,afforestation,floodforecasting,evacuationfloodplains;landuseregulationandinsurance.Casestudies ofmajorfloods.

Droughts–occurrence,majordroughtmanagement.

Unit- V:Conservation and planning for the development of water resources-social andinstitutionalconsiderations;integratedbasinplanning;conjunctiveuseofsurface andgroundwaterresources;watershedmanagement;internationalandinter-stateriverwaterdisputesandtreaties;somecasestudies.

SuggestedReadings:

- Agarwal,AnilandSunitaNarain(1997):DyingWisdom:Rise,FallandPotentialofIndia'sTraditionalWaterHarvestingSystem.CentreforScienceandEnvironment,NewDelhi.
- EconomicandSocialCommissionforAsiaandthePacific,UnitedNations(1989):Guidelinesforthepreparationof NaionalMasterWaterPlans.

CourseXVIII(D)
SoilGeography

CourseContents:

Unit- I : Nature, scope and significance of Soil Geography; its relationship with Pedology.Soilforming factors:parent material, organic, climatic, topographic Spatio-temporaldimensions.Processesofsoilformationandsoildevelopment;physical,biotic andchemical.

Unit- II : Soil organisms, macro-animals (earthworms, sowbugs, mites, centipedes, rodentsand insects), Microanimals and plants- Nematodes, Protozoa rotifers; fungi,bacteria,algaeandactinomyces.

Unit- III:Physicalproperties of soils: morphology, texture, structure, water, air,temperatureandotherpropertiesof soil;

Chemicalpropertiesofsoilandsoilreaction;

Genetic classification of soils, Taxonomic classification of soils- zonal, azonalandintra-zonalsoils,theircharacteristicsandworldpatterns;methodstoimprovethephysicalqualitiesofsoils;seventhapproximation,

Soilerosion,degradation,andconservation.

Unit- IV:Evaluationoflandandsoil:Parametricandnon parametric systems, Landcapability classification. Soil survey, modern techniques, field study of soilprofileandthecharacteristics.

Unit- V:Soil reclamation and management; soil survey and landforms in environmentalmanagement;Integratedsoilandwatermanagement;Sustainabledevelopmentofsoilresourceswithreference toIndia.

SuggestedReadings:

- Backman,H.O.andBrady,N.C.,(1960):TheNatureandPropertiesofSoils,McMillanNewYork.
- Bennet,HughH.:SoilConservation,McGrawHill,NewYork.
- Bunting,B.T.(1973):TheGeographyofSoils,Hutchinson,London.
- ClarkeG.R.(1957):StudyoftheSoilintheField,OxfordUniversityPress,Oxford.
- FothH.D.andTurk,L.M.(1972):FundamentalsofSoilscience,JohnWiley,NewYork.
- GovindaRajan,S.V.andGopalaRao,H.G.(1978):StudiesonSoilsofIndia,Vikas,NewDelhi.
- Mc.Bride,M.B.(1999):EnvironmentalChemistryofSoils,OxfordUniversityPress,NewYork.

CourseXIX(D)
EnvironmentalImpactAssessment

CourseContents:

Unit- I:UrbanEnvironment:Concept,componentsand levels of analysis; Urbanenvironment in context: city and region environment interaction – local andglobal impacts; Approaches to the study of urban environment; Models forchange detection in urban environment; Urban environmental issues in developedanddevelopingcountries.

Unit- II:Urbanization:Population growth; physical expansion of cities (urbanencroachment and related issues): Urban landuse; Urban Morphology: Housing(congestionandcrowding);Transportmanagement.

Unit-III:Unplannedlanduseandshortageofopenspaceandgreenareas;Industrialization:pollution (air, water, land and noise); Industrial waste management; climate ofcities:localandglobalimplications.

Unit- IV : Basis of Urban Environment Impact Assessment; Use of remote sensing and GISfor change detection and monitoring of environment; Strategies for sustainableurbanenvironmentbyvariousnations.

Unit- V:Natureofurban environment problems in Indian cities; Poverty slums anddeviant behaviour; Pollution (air, water and noise) and its impact on health anddisease patterns; Water crisis and water harvesting with special reference toDelhi.

SuggestedReadings:

- Barrow,C.J.,(1995):DevelopingtheEnvironmentalProblems&Management,Longman,Harlow.
- Burgess,R.:MarisaCarmonoandThedKolstee,(1997):TheChallengeofSustainableCities,ZedBooks,NewJersey.
- Canter,L.W.,(1996):EnvironmentImpactAssessment,McGrawHillInc.,NewYork.
- Cliff,A.AndHaggett,P.,(1989):AtlasofDistribution,BasilBlackwell,Oxford.
- Digby,A.andStewart,Z.(eds.)(1996):Gender,HealthandWelfare,Routledge,NewYork.
- Dutta,AandM.M.Agarwal,(1992):TheQualityofLifeinIndianCities,InstituteofAdvancedStudies,Shimla.
- GilbertandJosefGuglar,(1987):CitiesPovertyandDevelopment-Urbanisaitoninthe3rdWorld,OxfordUniversityPress,Oxford.
- Goudie,A.,(1993):TheHumanImpactonNaturalEnvironment,Blackwell,USA.

CourseXX

Dissertation

Note : The students under the supervision of a faculty member shall be selecting a topicfrom his field of specialization for the dissertation work.The dissertation shall befield work based applying the techniques learned by the student in practicals. It willcontain atleast 50 pages and 10 to 15 maps and diagrams / charts prepared by thestudent.The dissertation report duly signed by the teacher supervisor concerned besubmitted in the college before the theory examination of the university or as perinstructionsgivenbytheuniversity.Thereshallbeinternalvivavoceondissertation.The viva-voce examination will be purely internal and shall be conducted beforesending the dissertation to the university. The student will present his/ her findingsbefore the audience of department teachers and P.G. students. The questions will beasked by the faculty members and students. The supervisor will act as an internalexaminer,andtheinternalmarkswillbeawardedbyhim/her.

Thedistributionofmarksfordissertationcoursewillbeasfollows:

1.	Evaluation	-	50Marks((External)
2.	Viva–voce	-	50Marks(Internal)