

Annexure No.	40 B
SCAA Dated	29.02.2008

BHARATHIAR UNIVERSITY COIMBATORE – 641 046

**REGULATIONS FOR UNDERGRADUATE B. Sc. GEOGRAPHY DEGREE COURSE -
Semester System
(with effect from 2007-2008)**

1. Eligibility for Admission to the Course

Candidate for admission to the first year of the **B. Sc Geography** degree course shall be required to have passed the higher secondary examination (Academic or Vocational) conducted by the Govt. of Tamil Nadu in the relevant subjects or other examination acceptor as equivalent there to by the Syndicate, subject to such other conditions as may be prescribed therefore

2. Duration of the Course

The course shall extend over a period of three years comprising of six semesters with two semesters in one academic year. There shall not be less than 90 working days for each semester. Examination shall be conducted at the end of every semester for the respective subjects.

3. Course of Study

The course of study for the UG degree course shall consist of the following

4. Course of Study

The course of study for the UG degree course shall consist of the following

a) Part - I

Tamil or any one of the following modern/classical languages i.e. Telugu, Kannada, Malayalam, Hindi, Sanskrit, French, German, Arabic & Urdu. It shall be offered during the first four semesters with one examination at the end of each semester.

b) Part – II : English

The subject shall be offered during the first four semesters with one examination at the end of each semester. During third semester Part II English will be offered as communication skills.

c) Foundation Course

The Foundation course shall comprise of two stages as follows:

Foundation Course A : General Awareness (I & II semesters)

Foundation Course B : Environmental Studies (III & IV semesters)

The syllabus and scheme of examination for the foundation course A, General awareness shall be apportioned as follows.

From the printed material supplied by the University - 75%

Current affairs & who is who? - 25%

The current affairs cover current developments in all aspects of general knowledge which are not covered in the printed material on this subject issued by the University.

The Foundation course B shall comprise of only one paper which shall have Environmental Studies.

d) Part – III

Group A : Core subject – As prescribed in the scheme of examination.
Examination will be conducted in the core subjects at the end of every semester

Group B: allied subjects -2 subjects-4 papers
Examination shall be conducted in the allied subjects at the end of first four semesters.

Group C: application oriented subjects: 2 subjects – 4 papers
The application –oriented subjects shall be offered during the last two semesters of study viz., V and VI semesters. Examination shall be conducted in the subjects at the end of V & VI semesters.

Group D: field work/institutional training
Every student shall be required to undergo field work/institutional training, related to the application-oriented subject for a period of not less than 2 weeks, conveniently arranged during the course of 3rd year. The principal of the college and the head of the department shall issue a certificate to the effect that the student had satisfactorily undergone the field work/institutional training for the prescribed period.

Diploma Programme:
All the UG programmes shall offer compulsory diploma subjects and it shall be offered in four papers spread over each paper at the end of III, IV, V, & VI semesters.

e) Co-Curricular activities: NSS/NCC/Physical education
Every student shall participate compulsorily for period of not less than two years (4 semesters) in any one of the above programmes.

The above activities shall be conducted outside the regular working hours of the college. The principal shall furnish a certificate regarding the student's performance in the respective field and shall grade the student in the five point scale as follows

- A-Exemplary
- B-very good
- C-good
- D-fair
- E-Satisfactory

This grading shall be incorporated in the mark sheet to be issued at the end of the appropriate semester (4th or 5th or 6th semester).

(Handicapped students who are unable to participate in any of the above activities shall be required to take a test in the theoretical aspects of any one of the above 3 field and be graded and certified accordingly).

5. **Requirement to appear for the examinations**

- a) a candidate will be permitted to appear for the university examinations for any semester if
 - i) He/she secures not less than 75% of attendance in the number of working days during the semester.
 - ii) He/she earns a progress certificate from the head of the institution, of having satisfactory completed the course of study prescribed in the subjects as required by these regulations, and
 - iii) His/her conduct has been satisfactory.

Provided that it shall be open to the syndicate, or any authority delegated with such powers by the syndicate, to grant exemption to a candidate who has failed to earn 75% of the attendance prescribed, for valid reasons, subject to usual conditions.

- b) A candidate who has secured less than 65% but 55% and above attendance in any semester has to compensate the shortage in attendance in the subsequent semester besides, earning the required percentage of attendance in that semester and appear for both semester papers together at the end of the latter semester.
- c) A candidate who has secured less than 55% of attendance in any semester will not be permitted to appear for the regular examinations and to continue the study in the subsequent semester. He/she has to rejoin the semester in which the attendance is less than 55%
- d) A candidate who has secured less than 65% of attendance in the final semester has to compensate his/her attendance shortage in a manner as decided by the concerned head of the department after rejoining the same course.

6. **Restrictions to appear for the examinations**

- a) Any candidate having arrear paper(s) shall have the option to appear in any arrear paper along with the regular semester papers.
- b) “Candidates who fail in any of the papers in Part I, II & III of UG degree examinations shall complete the paper concerned within 5 years from the date of admission to the said course, and should they fail to do so, they shall take the examination in the texts/ revised syllabus prescribed for the immediate next batch of candidates. If there is no change in the texts/syllabus they shall appear for the examination in that paper with the syllabus in vogue until there is a change in the texts or syllabus. In the event of removal of that paper consequent to change of regulation and / or curriculum after 5 year period, the candidates shall have to take up an equivalent paper in the revised syllabus as suggested by the chairman and fulfill the requirements as per regulation/ curriculum for the award of the degree.

7. **Medium of Instruction and examinations**

The medium of instruction and examinations for the papers of Part I and II shall be the language concerned. For part III subjects other than modern languages, the medium of instruction shall be either Tamil or English and the medium of examinations is in English/Tamil irrespective of the medium of instructions. For modern languages, the medium of instruction and examination will be in the languages concerned.

8. **Submission of Record Note Books for practical examinations**

Candidates appearing for practical examinations should submit bonafide Record Note Books prescribed for practical examinations, otherwise the candidates will not be permitted to appear for the practical examinations. However, in genuine cases where the students, who could not submit the record note books, they may be permitted to appear for the practical examinations, provided the concerned Head of the department from the institution of the candidate certified that the candidate has performed the experiments prescribed for the course. For such candidates who do not submit Record Books, zero (0) marks will be awarded for record note books.

9. **Passing Minimum**

- a) A candidate who secures not less than 40% of the total marks in any subject including the Diploma and Foundation courses (theory or Practical) in the University examination shall be declared to have passed the examination in the subject (theory or Practical).
- b) A candidate who passes the examination in all the subjects of Part I, II and III (including the Diploma and Foundation courses) shall be declared to have passed, the whole examination.

10. **Improvement of Marks in the subjects already passed**

Candidates desirous of improving the marks awarded in a passed subject in their first attempt shall reappear once within a period of subsequent two semesters. The improved marks shall be considered for classification but not for ranking. When there is no improvement, there shall not be any change in the original marks already awarded.

11. **Classification of Successful candidates**

- a) A candidate who passes all the Part III examinations in the First attempt within a period of three years securing 75% and above in the aggregate of Part III marks shall be declared to have passed B.A/ B.Sc./B.Com./B.B.M. degree examination in **First Class with Distinctions**
- b) (i) A candidate who passes all the examinations in Part I or Part II or Part III or Diploma securing not less than 60 per cent of total marks for concerned part shall be declared to have passed that part in **First Class**
(ii) A candidate who passed all the examinations in Part I or Part II or Part III or Diploma securing not less than 50 per cent but below 60 per cent of total marks for concerned part shall be declared to have passed that part in **Second Class**
(iii) All other successful candidates shall be declared to have passed the Part I or Part II or Part III or Diploma examination in **Third Class**

12. **Conferment of the Degree**

No candidate shall be eligible for conferment of the Degree unless he / she,

- i. has undergone the prescribed course of study for a period of not less than six semesters in an institution approved by/affiliated to the University or has been exempted from in the manner prescribed and has passed the examinations as have been prescribed therefor.
- ii. Has satisfactorily participated in either NSS or NCC or Physical Education as evidenced by a certificate issued by the Principal of the institution.
- iii. Has successfully completed the prescribed Field Work/ Institutional Training as evidenced by certificate issued by the Principal of the College.

13. **Ranking**

A candidate who qualifies for the UG degree course passing all the examinations in the first attempt, within the minimum period prescribed for the course of study from the date of admission to the course and secures I or II class shall be eligible for ranking and such ranking will be confined to 10 % of the total number of candidates qualified in that particular branch of study, subject to a maximum of 10 ranks.

The improved marks will not be taken into consideration for ranking.

14. **Additional Degree**

Any candidate who wishes to obtain an additional UG degree not involving any practical shall be permitted to do so and such candidate shall join a college in the III year of the course and he/she will be permitted to appear for part III alone by granting exemption from appearing Part I, Part II and common allied subjects (if any), already passed by the candidate. And a candidate desirous to obtain an additional UG degree involving practical shall be [permitted to do so and such candidate shall join a college in the II year of the course and he/she be permitted to appear for Part III alone by granting exemption from appearing for Part I, Part II and the common allied subjects. If any, already passed. Such candidates should obtain exemption from the university by paying a fee of Rs.500/-.

15. **Evening College**

The above regulations shall be applicable for candidates undergoing the respective courses in Evening Colleges also.

16. **Syllabus**

The syllabus for various subjects shall be clearly demarcated into five viable units in each paper/subject.

17. **Revision of Regulations and Curriculum**

The above Regulation and Scheme of Examinations will be in vogue without any change for a minimum period of three years from the date of approval of the Regulations. The University may revise /amend/ change the Regulations and Scheme of Examinations, if found necessary.

18. **Transitory Provision**

Candidates who have undergone the Course of Study prior to the Academic Year 2007-2008 will be permitted to take the Examinations under those Regulations for a period of four years i.e. up to and inclusive of the Examination of April 2012 thereafter they will be permitted to take the Examination only under the Regulations in force at that time.

SCHEME OF EXAMINATION

SEMESTER	PART	SUBJECT AND PAPER	INSTRUCTIONAL HOURS/ WEEK	UNIVERSITY EXAMINATIONS	
				DURATION IN HOURS	MAX MARKS
First	I	Language I	6	3	100
	II	English - I	6	3	100
	III	Group. A Core Paper I Fundamentals of Geomorphology -I	5	3	100
		Paper II Geography of India	5	3	100
		Group B Allied I Statistics for Geography	6	3	100
		Foundation course	2	-	-
Second	I	Language II	6	3	100
	II	English II	6	3	100
	Fe	General Awareness Foundation course	2	3	100
	III	Paper III Group A Core Fundamental of Geomorphology II	6	3	100
		Paper IV Practicals I- Basics of Map making	4	3	100
		Group B Allied Paper I Statistics for Geography II	3	3	100
Third	I	Language III	6	3	100
	II	English III	6	3	100
	III	Paper V Group A Climatology	5	3	100
		VI Population & Settlement	5	3	100
		Group B Allied Elements of Cartography I	5	3	100
		Diploma I – Paper I Basics in Computers	3	3	100

Fourth	I	Language IV	6	3	100
	II	English IV	6	3	100
	III	Paper VII Group A Oceanography	5	3	100
	III	VIII Practicals-Map Interpretation and Climatic Diagrams.	4	3	100
		Allied Cartography Practicals	4	3	100
		Foundation B	4	3	100
		Diploma Basics of GIS & GPS	4	3	100
Fifth		Paper IX Geography of natural regions of the world	5	3	100
		Paper X Geography of Tamilnadu	5	3	100
		Paper XI Geography of Resources I	5	3	100
		AOS I Remote sensing and GIS	5	3	100
		AOS II Urban Geography	5	3	100
		Diploma – Computer Applications in Geography.	3	3	100
Sixth		Paper XII Political Geography	3	3	100
		Paper XIII Regional Geography of South East Asia.	5	3	100
		Paper XIV Surveying & Interpretation of Aerial photos and Satellite images.	4	3	100
		AOS I Environmental studies and management.	5	3	100
		AOS II Geography of resources II	5	3	100
		Diploma practical -Computer applications in Geography practical	3	3	100

SEMESTER – I
CORE PAPER – I
FUNDAMENTALS OF GEOMORPHOLOGY-I

UNIT I

Meaning of Geography – Branches of Geography – Nature and Scope of Geomorphology – Origin of Earth and Related Theories – Geological Time Scale.

UNIT II

Surface Molding Forces – Endogenic & Exogenic – Diastrophism – Folds – Faults.

UNIT III

Earthquakes and Volcanoes – Definition, Causes, types – Distribution and effects.

UNIT IV

Origin of Continents and Oceans – Wegner's Continental Drift Theory – Plate Tectonics.

UNIT V

Rocks – Types – Igneous, Sedimentary and Metamorphic – Interior of Earth.

BOOKS FOR REFERENCE:

1. Arthur N. Strahler (1989), Physical Geography, Prentice Hall, New Jersey, U.S.A.
2. Worcestor Phillip G.(1972), A Text Book of Geomorphology, East West Edition.
3. Woobridge & Morgan, An Outline of Geomorphology, Longman London.
4. Monkhouse F.J. (1976) Principles of Physical Geography, Hodder & Stroughton, London.
5. Thombury W.D. (1969), Principles of Geomorphology, Jhon Willey and Sons New York.

**SEMESTER – I
CORE PAPER-II**

GEOGRAPHY OF INDIA

UNIT I

Location – Physiography – Drainage – Climate – Major Soil Types – Natural Vegetation.

UNIT II

Agriculture: Irrigation: Sources and types – Distribution of Major crops – Rice, Wheat, Sugarcane, Cotton, Jute, Tea, Coffee & Oilseed – Agricultural Problems – Green Revolution.

UNIT III

Minerals – Distribution of iron ore, Bauxite, Manganese, Mica – Atomic Minerals. Power Resources - Hydrel Power - Multipurpose Projects – Thermal Power – coal, Petroleum - Nuclear Power.

UNIT IV

Industries : Iron & Steel, Cotton & Jute textiles, Sugar & Cement.

UNIT V

Population : Growth, Distribution and Problems – Transport: Surface, Water & Air – Foreign Trade.

BOOKS FOR REFERENCE

1. Gopal Singh (1970), Geography of India, Atma Ram & Sons.
2. Sharma T.C. & Coutinho O. (1983), Economic and Commercial Geography of India, Cikas Publishing House.
3. Mamoria (1980), Economic and Commerical Geography of India, Shiva Lal Agarwala & Co, New Delhi.
4. Dubey R.N. & Negi Economic Geography of India.
5. Sigh R.L.(1987), India a Regional Geography, UBS Publishers & Distributors Ltd.,
6. Spate OHK (1960) India & Pakistan. Methuen & Co., London.
7. Memoria (1966) Agricultural Geography of India, Rawat Publishers, New Delhi.

SEMESTER-II

CORE PAPER-II

FUNDAMENTALS OF GEOMORPHOLOGY-II

UNIT I

Gradational Process: Aggradation and Degradation – Weathering and Mass Wasting – Types – Resultant features.

UNIT II

Agents of Erosion – Drainage – River Patterns – Erosional & Depositional Landforms – Underground Water – Karst Landforms.

UNIT III

Glaciers – Types – Erosional & Depositional Landforms.

UNIT IV

Wind – Aeolian Landforms – Wave – Coastal Landforms.

UNIT V

Concept of Normal Cycle of Erosion by Davis – Applied Geomorphology with reference to engineering and hydrological studies.

BOOKS FOR REFERENCE

1. Arthur N. Strahler (1989), Physical Geography, Prentice Hall, New Jersey, U.S.A.
2. Worcestor Phillip G.(1972), A Text Book of Geomorphology, East West Edition.
3. Woobridge & Morgan, An Outline of Geomorphology, Longman London.
4. Monkhouse F.J. (1976) Principles of Physical Geography, Hodder & Stroughton, London.
5. Thombury W.D. (1969), Principles of Geomorphology, Jhon Willey and Sons New York.

SEMESTER – II
PAPER IV CORE PRACTICAL-I

BASICS OF MAPMAKING

UNIT I

Maps – importance and role in Geography – Types and uses of Maps – Types of Scales: Linear and comparative Scales.

UNIT II

Enlargement, Reduction and Combination of Maps – Measurement of area and distance – Bearing and Directions.

UNIT III

Representation of Relief – different methods – Interpolation of contours – Cross section of selected features.

UNIT IV

Profiles: Serial, Superimposed, Projected, Composite profiles – River profile – Longitudinal and transverse.

UNIT V

RECORD.

BOOKS FOR REFERENCE

1. Rangunandan Singh & Kanuja, Map work and Practical Geography, Centrl Books depot Allahabad.
2. R.L.Singh (1979), Elements of Practical Geography, Kalyani Publishers, New Delhi.
3. Monkhouse: Mapwork.
4. Bygott.J. (1955), Mapworkd and Practical Geography, University Totorial Press-Londong.
5. Buch T.W. – Maps – Topographical and Statistical, Oxford Lavender Press – London.
6. Monkhouse & Wilkinson (1966), Maps and Diagrams, Methunen Press, London.

SEMESTER III
GROUP A **PAPER V**
CLIMATOLOGY

UNIT I

Atmosphere – Structure – Composition – Green house effect

Insolation – Heat balance.

Inversion of temperature

Factors affecting the horizontal distribution of temperature – Horizontal distribution of temperature.

UNIT II

Atmospheric pressure – Vertical and Horizontal distribution – Thermal and dynamic origins – pressure gradient.

Wind – General circulation – planetary winds – Seasonal winds – Local winds Seasonal changes in circulation – El Nino.

UNIT III

Air masses – lapse rates – forms of condensation.

Fronts – Temperate cyclones – Origin and Development.

Tornadoes and Tropical Cyclones – Origin and Development.

UNIT IV

Koppen's Climatic Classification.

Extreme Weather – Case studies.

BOOKS FOR REFERENCE:

1. Trewartha Glen T & Horn Lyle H. An Introduction to climate Mc Graw Hill.
2. Critchfield – Climatology Prentice Hall of India.
3. Lake P – Physical Geography.
4. Singh S – Physical Geography Prayag Publishers, Allahabad.

SEMESTER III
GROUP A PAPER VI
POPULATION AND SETTLEMENT

UNIT I

Population Geography – Scope – Content – Factors – Sources and Problems of data and Pattern of distribution – Growth – Trend – World – India – Problems.

UNIT II

Population growth – Factors – India – World Population growth - Population composition – Demographic Structure – Fertility – Mortality rates.

UNIT III

Human Migration – Factors – Causes & Consequences – Types of Migration – Population and Resource based theories – Malthus – Ricardo – Optimum – Transitional theory.

UNIT IV

Settlements – Types – Factors – Distribution – Site and situation - Rural – Urban Settlements – Classification – Functional – Census – Urban land use – Ecological theories – Concentric – Sector – Multiple Nuclei.

UNIT V

Growth of urban centres – Metropolis, Megalopolis – Conurbation – Slums – Associated problems – Functional zones of Coimbatore - Chennai, Delhi.

REFERENCE BOOKS:

1. Peripillou. A. Human Geography – Longman's London 1966.
2. Money De. Pattern of settlements even brothers London.
3. Mayor HN & Kohn. CF Reading in Urban Geography.
4. Carter Harold. The study of Urban Geography, London.

**SEMESTER III
GROUP B ALLIED**

ELEMENTS OF CARTOGRAPHY

Unit I

Maps: Definition, types, uses – scope and content cartography – branches of cartography – development of cartography from ancient to recent period.

Unit II

Geographic coordinates – types of north – problems of transforming spherical surface – Map projections – classification including UTM – properties, limitations.

Unit III

Data for representation: source – data types – techniques of data collection – coding and classification.

Unit IV

Map design and layout – principles and problems – symbolization – point, line and area symbols. Lettering – forms, styles, sizes – positioning of lettering – methods standardization of geographical names.

Unit V

Map compilation and generalization – base map compilation, generalization and finalization.

BOOKS FOR REFERENCE:

1. Robinson A.H. (1953), Elements of cartography, John Wiley, London.
2. Raize, (1982) principles of cartography, Mc Graw Hill & company, New York.
3. Mishra R.P & Ramesh (1989) Fundamentals of cartography, concept publication Delhi.
4. Lawrence G.R.P (1979) cartographic methods, Methuen, London.
5. Monk house F.J. (1967) maps and diagrams, Methuen, London.

B.Sc. GEOGRAPHY
(Diploma Course)
Paper :Basics in Computers

1) **Introduction**

- History of Computers
- Meaning of Computers
- Advantage of Computers

2) **Uses of Computers**

- In Business
- Industry
- At Home
- At Play
- In Education
- In Training
- In Entertainment
- In Arts
- In Science
- In Engineering
- In Mathematics

3) **Types of Computers**

- According to purpose
 - General Purpose
 - Special Purpose
- According to type
 - Anolog Computer
 - Thermometer
 - Speedometer
 - Digital Computer
 - Hybrid Computer
- Super Computer
 - Main Frame
 - Mini Computer
 - Micro Computer

4) **Computer of a Computer**

- Input Devices
 - Key Boards
 - Mouse, Joystick
 - Optical Scanner
 - Light Pen
 - Touch Screen
 - Voice Data
 - Swart Cards
- The Central Processing Unit
 - Main Memory

- ❖ Arithmetic Logic Unit
- ❖ Control Unit
- Secondary Storage Storage Devices
- ❖ Magnetic Disk
- ❖ Optical Disk
- ❖ Magnetic Tape
- Output Devices
- Printers
- Plotters
- Screen
- Robot
- 5) **Computer Hardware and Software**
- Meaning of Hardware
- Meaning of Software
- Classification of Software
- ❖ Systems Software
- ❖ Application Software

References:

- 1) Alexis Leon, Mathews Leon, "Introduction to Computers", Leon Techworld. 1999
- 2) Horowitz. E. and Sahani.S, "Fundamentals of Computers Alogrithms"
- 3) Jaiswals. A, "Fundamentals of Computers"
- 4) Rajaraman. V "Fundamentals of Computers"
- 5) Ram.B, "Computer Fundamentals"

SEMESTER IV
GROUP A PAPER VII
Oceanography

Unit –I

Definition, scope & importance of oceanography – place in Geography – General distribution of land & sea – Area & depth of oceans – Hypsographic curve – zones of ocean bottom accounting to depth – Continental shelf- Continental slope, Deep sea plain & deeps. (No theories)

Unit II

Bottom relief of Atlantic, Pacific & Indian oceans, Horizontal & Vertical distribution of temperature in oceans.

Unit –III

Composition of sea water – salinity – Horizontal distribution in open ocean, Enclosed & partially enclosed sea. Oceanic circulation factors controlling current circulation in Atlantic, Pacific & Indian oceans.

Unit -IV

Waves & Tides – Movement of the ocean – speed of waves – Breaking of waves – Tides – Tide producing forces – types of tide – theories regarding origin of tides - The equilibrium theory, progressive wave theory, stationary wave theory.

Unit -V

Deposits on the ocean floor – Terrigenous & Pelagic deposits – Distribution; Coral reefs & Islands – distribution & structure of coral reefs.

Books for reference:

1. Philip Lake (1949) Physical Geography, Cambridge, at the university press.
2. Peter K. Weyl (1970) John Wiley & Sons, Inc. New York,
3. R.C. Sharma & M.Vatal (1970) Oceanography for Geographers, Chaitanya Publishing house, Allahabad- 2.
4. Harold V. Thurman (1990) Macmillan Publishing Company, New York.

SEMESTER IV PAPER VIII PRACTICAL GEOGRAPHY – II

MAP INTERPRETATION AND CLIMATIC DIAGRAMS

100 Marks.

UNIT I

Survey of India – inception – Maps produced by survey of India – Topographic maps – conventional signs and symbols – Cartographic appreciation – Interpretation of Topographic maps of the scale of 1:63360, 1:50000 and 1:250000.

UNIT II

Department of Meteorology – Weather forecasting and Tsunami warning centres – Indian daily weather report – Signs and Symbols – Interpretation of daily weather report maps – Station model – Cyclonic track.

UNIT III

Climatic diagrams – Simple climatic graphs – Climographs – Taylor’s climograph, Hythergraph and Ergo graph.

UNIT IV

Wind rose diagrams – Simple, Star, Octagonal, Compound and Super-imposed wind rose diagrams – Rainfall dispersion diagrams.

UNIT V

RECORDS – 20 MARKS.

BOOKS FOR STUDY

R.L. Singh; Elements of Practical Geography.

John Boycott; Map work and Practical Geography

Ragunandan Singh & K. ananjia – Map work and Practical Geography.

William Bayley Lipton – Landforms and Topographic maps.

Vaidyanathan .R – Index to the study of Topographic maps.

Misra. R.P. Fundamentals of Cartography.

SEMESTER IV

GROUP B

CARTOGRAPHY PRACTICAL

UNIT I

Map Setting

Map Reading.

UNIT II

Projections – Cylindrical & Conical.
Construction, Uses & Properties.

UNIT III

Projections – Zenithal & Conventional.
Construction, Uses & Conventional.

UNIT IV

Mapping of socio economic data.

UNIT V

Record.

**SEMESTER IV
DIPLOMA PAPER II**

BASICS OF GIS AND GPS

UNIT I

GIS: Development – Scope – Components of GIS

UNIT II

Types of data: Spatial and attribute data – Raster and Vector data Models – their characteristics.

UNIT III

Methods of data input – Storage – Data quality – Data out put.

UNIT IV

Data analysis – Application of GIS in various fields.

UNIT V

GPS – Satellites – Segments – Receivers – Errors and Biases – Measurement – Application.

Reference :

- (i) Ahmed, El Rabbany (2000): Introduction to Global Positioning System, Artech House Publishers, London.
- (ii) Anji Reddy, M(2001): Remote Sensing and Geographical Information System, B.S. Publishers, Hyderabad.
- (iii) Burrroughs, P.A.(1986): Principles of Geographic Information Systems for Land Resources Assessment, Oxford University Press, London.
- (iv) Heywood, Ian et.al.(2003): An Introduction to Geographical Information Systems, Pearson Education Pvt. Ltd., Delhi.

SEMESTER V

PAPER IX

COREPAPER GROUP A

GEOGRAPHY OF NATURAL REGIONS OF THE WORLD

UNIT I

Region – definition – Methods of delineation of regions – formal and functional regions.
Natural components of regions – Landforms: Types and Distribution
Climate: Types and Distribution.

UNIT II

Soils: Types and Distribution
Natural Vegetation: Types and Distribution.
Basis of Regionalization.

UNIT III

Equatorial region – Lowland and Highland

Tropical region – Monsoon, grassland and deserts

UNIT IV

Warm Temperate region – Mediterranean, Temperate grasslands and China Type.

Cool Temperate region – West coast Marine, Laurentian type.

UNIT V

Siberian region

Polar region: Highland of icecap, Lowland or Tundra.

REFERENCE:

1. Oliver Heintzelman and Richard M Highsmith – World regional Geography – Prentice Hall of India.
 2. Paulward English, James A Miller – World Regional Geography.
 3. Unstead J.F. – A systematic Geography – Univ. of London press.
4. Roger Minshull – Regional Geography – Theory and practice – Hutchinson University library.

SEMESTER V

PAPER X

GEOGRAPHY OF TAMILNADU

UNIT I

Location and Geographical extent – Physical – Relief – Divisions – Climate – Monsoons in Tamilnadu – Drainage – pattern – Soils – Types – Natural vegetation.

UNIT II

Agriculture: Irrigation – Types and distribution – Problems – Major crops – Food Crops – Commercial & Plantation crops.

UNIT III

Resources: Natural resources - Mineral resources – Power resources – Distribution & Development – Conventional – Non-conventional energy resources- Major HE Projects _ Thermal projects.

UNIT IV

Industries: Locational factors – Distribution of cotton, Textiles, Cement, Sugar factories, Paper – Engineering Industries.

UNIT V

Population, Transport & Trade – Population growth and distribution – Rural and Urban population – Population composition – Sex, Age, Religious, Linguistic. Transport: Roads and Railways – Significance of Trade.

BOOKS FOR REFERENCE

1. India and Pakistan – Spate OHK & Learmonth.
2. Field Crops of India – Sathya Narayanan.
3. Economic Atlas of India – T.T. Maps & Atlas.
4. Tamilnadu – An Economic Appraisal.
5. Resource Atlas of Tamilnadu –Department of Geography, University of Madras.
6. Techno – Economic Survey of India.

SEMESTER V

GROUP A PAPER XI

GEOGRAPHY OF RESOURCES-I

UNIT I

Scope and Content – Nature and Classification of resources – Characteristics and their distribution – Utilization and conservation of resources.

UNIT II

Soil resources – Formation – Soil profile – World classification of Soils – Characteristics of important soil types – Soil erosion and conservation.

UNIT III

Forest resources – Equatorial rainforest – Tropical deciduous forest – Temperate Conical forest – Grass lands – Steppe grass lands – Prairies and the Savannas.

UNIT IV

Marine resources – World's fisheries – Major fishing grounds of the world – Fisheries of Atlantic, Pacific and Indian Oceans – Important fishing harbours of the world, Oceans as the future store house of the world.

UNIT V

Agricultural resources: Determinants of agriculture – World agriculture types – Methods of cultivation – Cropping Techniques – Benefits of Inter-cropping method – Food crops – Rice and Wheat – Commercial agriculture – Important commercial crops like Cotton, Sugarcane and Groundnut- Plantation agriculture – Tea & Coffee.

BOOKS FOR STUDY

1. Economic Geography – An appraisal of Resources Sadhukhan S.K.
2. Economic and Commercial Geography Negi. B.S.
3. Economic and Commercial Geography – Prof. Qazi S.A.
4. Human and Economic Geography – Goh chang Leong & Gillian C. Morgan.
5. Economic Geography – Alexander J.W.
6. Geography of Resources – Guha & Chattaraj.

SEMESTER V

PAPER: AOS I

REMOTE SENSING AND GIS

UNIT I

Remote sensing : Meaning – Scope – content – Types – Development – Electromagnetic energy – Radiation principles – Electromagnetic spectrum – Energy interactions – Remote sensing systems.

UNIT II

Aerial Remote sensing – Air Photo – Axis – Lens, Film – Scale types – Uses – Stereo Scopic vision – Elements of Air photo interpretation.

UNIT III

Satellite Remote sensing – Types of satellites – Resolutions – Landsat – SPOT – IRS images – Marginal information – Types of Satellite products interpretations.

UNIT IV

Remote sensing applications in Geography – Water resources – Study of Forest land use and agriculture – Mineral exploration – Urban studies – Planning.

UNIT V

Geographic Information System – Scope – content – Digital data anaksus, Data structure – Raster & Vector data, Data merging – Thematic Map outputs, GIS & GPS – Significance & their application in different fields.

REFERENCE BOOKS:

1. Curran .P.J. Principles of Remote Sensing, English Language books Society Longmans (1985).
2. Sabins Jr. Remote Sensing – Principles and interpretation, Freeman & Co. Sanfranciscoi (1978).
3. Lillesand & Kiefer, Remote Sensing and image interpretation, John Wiley & Sons, New York (1979).

**SEMESTER V
PAPER: AOS II**

URBAN GEOGRAPHY

UNIT I

Settlement Geography – Branches – Urban Geography – Scope & Content – Factors – Urban growth – Urbanization – World – India.

UNIT II

Urban centres – Definition – Site and Situation – Urban systems – Urban morphology – Urban zones – Classification of Towns – Functional – Census.

UNIT III

Urban land use – Models – Urban growth – Horizontal, Vertical – Impact of Urban Sprawl – Urban Fringe – Characteristics – Delineations.

UNIT IV

Metropolitan cities – Urban Regions – World – India – Umland – Characteristics – Sub urbanization.

UNIT V

Urban Centres – Growth centres – Size – Space, Rank size rule, Central place Theory – Urban problems – Pollution, Transport – Slums.

BOOKS FOR REFERENCE:

1. Northam R.M. – Urban Geography, John Wiley & Sons New York.
2. Cartes H. The study of Urban Geography, Edward Arnold London.
3. Mirsa R.P. & K.V. Sundaram Regional planning & Development.
2. Mukerjee. R.K. (1988) Man His Habitation, Popular Books, Bombay.
3. Chisholm, M 1970 Rural Settlement and Land use. Hutchinson, London.

SEMESTER V

DIPLOMA IN COMPUTER APPLICATIONS IN GEOGRAPHY

Computer Applications in Geography

1. Computer Applications in Geography: The need – development and growth – advantages and disadvantages.
2. Computer assisted cartography – the need – recent trends – applications and limitations.
3. Computer applications in physical geography: geomorphological, hydrological, atmospheric and oceanographic applications – merits and limitations.
4. Computer applications in human geography: diffusion studies, simulation and network analysis – trends.
5. Role of computers in the development of remote sensing and geographical Information system – their applications in geography – Internet and its uses – world wide web.

REFERENCES:

1. Clarke, K.C., (1990) : Analytical and Computer Cartography, Prentice Hall, New Jersey.
2. Ganesh, A., (2007) : Computer Basics for Young Scientists, Dept. of Geography, Bharathidasan University, Tiruchirappalli.
3. Kraak, Menno-Jan and Allan Brown (2001) : Web Cartography, Taylor & Francis, London.
4. Mather, Paul M., (1991) : Computers in Geography – A Practical Approach, Basil Blackwell, Oxford.
5. Robinson, A.H., (1969): Elements of Cartography, John Wiley and Sons, New York.
6. Zhong-ren peng and Ming. Hsiang (2001) : Internet GIS, John Wiley & Sons, New Jersey.

SEMESTER VI

PAPER XII

GROUP A

POLITICAL GEOGRAPHY

UNIT -1

Scope & content of political Geography, Geopolitics. State:- Powers and functions of the State- Categories of the State-Nations and Nationalism.

UNIT-11

Core areas Types, Capitals: Types, Morphological classification, Factors of development. Federal capitals - New and neutral capitals - capitals in post - 1945 federations.

UNIT-111

Boundaries and Frontiers: Definition, Boundary classification: Genetic or I functional. Morphological classification (Buffer zone - Land locked countries) -Border disputes.

UNIT - IV

Electoral geography: Geography of elections - Geography of campaigning, voting pattern, voters participation - Gerry mandering - Election Commission.

UNIT-V

Political Geography of India - Integration of Indian status - integration of Sikkim -, India's border relationship with China-Pakistan- Bangladesh and Srilanka - Indian's I Foreign policy,

Books for Study

1. Dikshit, R.D. Political Geography: A contemporary perspective - Taba McGraw j Hill publishing Co.. New Delhi, 1982.
2. Pounds. J.G. Political Geography - McGraw Hill book Co. t 3. Muin, R. Modern Political Geography. Macmillan.London.1981.
4. Prescott, J.R.V. Political Geography, Methuen. London, 1972.
5. De Blij Harm, J. Systematic political Geography, John Wiley and Sons, New York, 1980.

SEMESTER VI

PAPER XIII

GROUP A

REGIONAL GEOGRAPHY OF SOUTH EAST ASIA

UNIT I

Region – Definition – The regional methods of description – Regions as real objects – Types of Regions – Formal and Functional regions – Regionalism – Nature of regional Geography – Natural regions – Economic and Industrial regions.

UNIT II

South East Asia: Introduction – Location – Physiography – climate – Natural vegetation – Animal life – Soil - Major soil types – Distribution – Soil erosion and Conservation.

UNIT III

Agriculture: Food Crops – Rice, Wheat and Millets – Commercial crops – Cotton , Jute, Sugarcane - Plantation crops – Tea, Coffee and Rubber.

UNIT IV

Burma (Myanmar) – Introduction – Physiography – Climate – Drainage – Soil – Vegetation – Agriculture – Minerals – Industry – Population – Transport and Trade.

UNIT V

Indonesia: Introduction – Physical background – Climate – Natural vegetation – Agriculture – Population – Java – the heartland of Indonesia – Sumatra an outer island.

BOOKS FOR STUDY:

1. Roger Minshull – Regional Geography – Theory and Practice.
2. George B.Cressey – Asia's lands and people.
3. Natalia G. Studies in Regional Geography.
4. Naton Ginsgurg, John E.Bush and Others – The pattern of Asia.
5. Dudley Stamp. L. India, Pakistan, Ceylon and Burma.
6. Dudley Stamp. L. A New Geography of India, Burma & Ceylon.
7. Jasper H. Stembridge – The world – A General Regional Geography.
8. Charles Rohequarin – Malaya, Indonesia, Burma and the Philippines.
9. Hugh Rohut Mill – General Geography.
10. கிருஷ்ணமூர்த்தி.ஜி - தென்கிழக்கு ஆசியா.

SEMESTER VI PAPER XIV GROUP A

**SURVEY & INTERPRETION OF AERIAL PHOTOS AND
SATELLITE IMAGES**

Marks: 80+20(RECORD)

UNIT I

Land Surveying: Chain Surveying:-Open and closed Traverses, Prismatic Compass:- Open and closed Traverse, Plane table Surveying.

UNIT II

Height Measurement & Leveling : Indian Clinometers : Accessible and Inaccessible bases, Abney level base : Accessible and Inaccessible, Dumpy level; Level difference and height measurement.

UNIT III

Air photo interpretation : Types of air photo – Stereoscopic vision and interpretation of air photos.

UNIT IV

Satellite image interpretation :- Interpretation of Single band and Multiband data, True Colour and False Colour composites.

UNIT V

RECORD

BOOKS FOR STUDY

Regunandan Singh & Kamujia – Map work and practical Geography – Central book Debot – Allahabad.

R.L. Singh – Elements of Practical Geography – Kalyani publishers – New Delhi.

Bygott, Map work and practical Geography – University Tutorial press – London.

T.W.Buch – Maps – Topographical and Statistical – Oxford Lavender Press, London.

SEMESTER VI PAPER AOS I ENVIRONMENTAL STUDIES AND MANAGEMENT

UNIT I

Environment – Meaning – Components – Geography and Environmental Fundamental concepts in environmental Geography.

UNIT II

Ecosystems – Meaning – Types – Components.

Transformation of energy in the ecosystem – Food chains, Food Webs.

UNIT III

Natural hazards

Environmental degradation – Meaning and types.

Human impact on the environment – deforestation, soil erosion and degradation, Landslides, Salinisation, Desertification.

Population growth and food supply.

Global climatic change – Global warming.

UNIT IV

Man induced Hazards – Air pollution, Water pollution, Land pollution.
Case studies from the world and India.
Waste management – the problem of toxic wastes.

UNIT V

Environmental impact assessment – Meaning and concept.
Case study of Sardar Sarovar Project and Tehri Dam.
The role of environmental movements in protecting the environment – case studies – world and national level.

SEMESTER VI

PAPER AOS II

GEOGRAPHY OF RESOURCES II

UNIT I

Fisheries – Economic significance of sea – Fishing – Types – Factors of growth and the distribution of commercial fishing in the Banks and open-sea Fisheries of the world. International trade – Fish conservation – Trends in Fishing industries – Fisheries and Fishing in India.

UNIT II

Human resources – Distribution of human resources – the modern Demographic pattern – Trend of world population – Density of population – Man-land ratio – Optimum population – Over-population and Under-population – Carrying capacity of the land.

UNIT III

Minerals and power resources – Types, Significance, Distribution and production of Iron ore, Bauxite, Copper, Manganese, Tin, Zinc, Lead, Mica and Gypsum – Coal, Petroleum, Natural gas and Atomic power.

UNIT IV

Industrial resources: Localization factors and distribution of Iron and Steel industry – Ship building – Aircraft – Automobile – Cement - Chemical and Textile industries of the world.

UNIT V

Transport and Trade: Major transport systems of the world – Road, Rail and Air transport – Inland water ways and Ocean transport, Composition of International trade – Pattern of trade – Balance of Trade – Recent trends and trade organizations.

**SEMESTER VI
DIPLOMA PRACTICAL**

COMPUTER APPLICATIONS IN GEOGRAPHY PRACTICAL

1. Basic Computer operations – Use of MS WORD and MS ACCESS.
2. Drawing of diagrams and graphs using Computers.
3. Elementary Image Processing techniques.
4. Raster and Vector data: Digitization and Scanning – Creation of data files.
5. Handling of GPS receivers – Fundamentals of GPS Survey.