

Under Graduate Programme in Geography

COURSE OF STUDY, SCHEME OF EXAMINATIONS AND SYLLABI

**GENERAL COURSE PATTERN FOR UNDER GRADUATE- SCIENCE-
2018-2019 ONWARDS**



P G Department of Geography
Periyar E.V.R. College (Autonomous)
Tiruchirappalli – 620 023.

B.Sc., Degree Board of Study Minutes (2018-2019)

The board resolved that the following titles of the papers are changed as follows:

OLD TITLE

1. Basics of Cartography
2. Basics of Remote Sensing
3. Geography of Settlement.
4. Geography of Resources
5. Introduction to GIS and GPS

NEW TITLE

- Fundamentals of Cartography
- Fundamentals of Remote Sensing
- Settlement Geography
- Geography of World Resources
- Basics of GIS and GPS

- Resolved that core practical- II* Climatic Diagram and Weather Map Interpretation replaced by maps, scales and landscape analysis in I semester.
- Resolved that allied- II* practical Mapping of Spatial Data Distribution replaced by the Diagrammatic Representation of Data in I semester.
- Resolved that Diagrammatic Representation of Data replaced by mapping of Spatial Data Distribution in III semester.
- Resolved that the title of the paper allied- I Basic of Cartography changed as of Fundamentals of Cartography.
- Resolved that allied practical- II* Maps and Scales replaced by Climatic Diagram and Weather Map Interpretation in III semester.
- Resolved that the title of the paper core VII Basic of Remote Sensing changed as Fundamental of Remote Sensing.
- Resolved that the title of the paper Geography of Settlement core- IX changed as Settlement Geography.
- Resolved that the core practical- X-P Projection and Surveying replaced by Quantitative Techniques and Map Interpretation in the six semester is shifted into V semester.
- Resolved that the major elective- II Geography for Competitive Examination has been replaced by the Agricultural Geography in V semester .
- Resolved that the SSD- Soft Skill Development a new paper introduced in the V semester as per Bharathidasan University guideline.
- Resolved that the title of the paper Geography of Resources changed as Geography of World Resources in VI semester.
- Resolved that the title of the paper Introduction to GIS & GPS changed as Basics of GIS & GPS in VI semester.

- Resolved that the core practical- XIV-P Quantitative Techniques and Map Interpretation replaced by Map Projection and Surveying in VI semester.
- Resolved that the content of paper Natural Regions of the World fully modified.
- Resolved that the practical exam to be conducted at the end of the even semester for I& II year students. But for the III year students Vth and VI semester the practical exams should be conducted at the end of the same semester.

Question Pattern

- Five out of Eight questions will be the U G Question paper Pattern for **Skill Based Elective** only, (5 x 15= 75 Marks)
- **Environmental Studies** and **Gender Equality**. Minimum of one question is compulsory from each unit in all subjects.

U G Practical Question Paper Pattern

- SEM.: 60 marks + CIA: 40 marks = Total: 100 marks
 - SEM. : Question: (5 x 12 =) 60 Marks = 60 Marks
 - CIA : = 40 Marks
(Continuous Performance: 15 Marks, Model Examination: 10 Marks, Record: 10 Marks, Attendance: 05 Marks)
 - Total : =100 Marks
- Five questions without choice is the common pattern.

U.G theory question paper pattern (SEM.: 75 marks + CIA: 25 marks = Total: 100 marks)

| | | |
|-------------|--|------------------|
| Section – A | Ten questions (two questions for each unit) | 10 x 2 = 20marks |
| Section – B | Five questions (two questions for each unit- either or type) | 05 x 5 = 25marks |
| Section – C | Three questions (3 out of 5 questions - one question is compulsory from each unit) | 3 x 10 = 30marks |

INDEX

| PERIYAR E.V.R. COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI - 23 | | | | | | | | |
|--|--------|---------------------|---|-----------|-----------|---------------|---------------|------------|
| GENERAL COURSE PATTERN FOR UG - SCIENCE - 2018-2019 ONWARDS | | | | | | | | |
| SL. No. | PART | COURSE | COURSE TITLE | Hrs. | Credits | Internal Exam | External Exam | Total |
| I SEMESTER | | | | | | | | |
| 1 | P - I | TAMIL - I | Tamil | 6 | 3 | 25 | 75 | 100 |
| 2 | P - II | ENGLISH-I | English | 6 | 3 | 25 | 75 | 100 |
| 3 | P-III | CORE - I | Climatology | 6 | 6 | 25 | 75 | 100 |
| | | CORE - II*-P | Maps, scale and Landscape analysis | 2 | - | - | - | - |
| 4 | | FIRST ALLIED I | Oceanography | 4 | 4 | 25 | 75 | 100 |
| | | FIRST ALLIED II*-P | Diagrammatic Representation of Data | 2 | - | - | - | - |
| 5 | P - II | VE | Value Education | 2 | 2 | 25 | 75 | 100 |
| 6 | | SBE II | Geography of Travel and Tourism | 2 | 2 | 25 | 75 | 100 |
| TOTAL | | | | 30 | 20 | 150 | 450 | 600 |
| II SEMESTER | | | | | | | | |
| 7 | P - I | TAMIL II | TAMIL II | 6 | 3 | 25 | 75 | 100 |
| 8 | P - II | ENGLISH II | ENGLISH II | 6 | 3 | 25 | 75 | 100 |
| 9 | P-III | CORE II*-P | Maps, scale and Landscape analysis | 4 | 4 | 40 | 60 | 100 |
| 10 | | CORE III | Geomorphology | 6 | 6 | 25 | 75 | 100 |
| 11 | | FIRST ALLIED II*-P | Diagrammatic Representation Data | 2 | 2 | 40 | 60 | 100 |
| 12 | | FIRST ALLIED III | Hydrology | 4 | 4 | 25 | 75 | 100 |
| 13 | P-IV | ES | Environmental Studies | 2 | 2 | 25 | 75 | 100 |
| TOTAL | | | | 30 | 24 | 205 | 495 | 700 |
| III SEMESTER | | | | | | | | |
| 14 | P - I | TAMIL III | TAMIL III | 6 | 3 | 25 | 75 | 100 |
| 15 | P - II | ENGLISH III | ENGLISH III | 6 | 3 | 25 | 75 | 100 |
| 16 | P-III | CORE IV | Geography of India | 4 | 4 | 25 | 75 | 100 |
| | | CORE V*-P | Mapping of Spatial Data Distribution | 2 | - | - | - | - |
| 17 | | SECOND ALLIED I | Fundamentals of Cartography | 4 | 4 | 25 | 75 | 100 |
| | | SECOND ALLIED II*-P | Climatic diagram and Weather Map Interpretation | 2 | - | - | - | - |
| 18 | | ME I | Land use and Cadastral Surveying | 4 | 4 | 25 | 75 | 100 |
| 19 | P-IV | SBE II | Basics of Disaster Studies | 2 | 2 | 25 | 75 | 100 |
| TOTAL | | | | 30 | 20 | 150 | 450 | 600 |

PERIYAR E.V.R. COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI - 23

GENERAL COURSE PATTERN FOR UG - SCIENCE - 2018-2019 ONWARDS

| SL. No. | PART | COURSE | COURSE TITLE | Hrs. | Credits | Internal Exam | External Exam | Total |
|--------------------|--------|---------------------|---|------------|------------|---------------|---------------|-------------|
| 20 | P - I | TAMIL IV | TAMIL IV | 6 | 3 | 25 | 75 | 100 |
| 21 | P - II | ENGLISH IV | ENGLISH IV | 6 | 3 | 25 | 75 | 100 |
| 22 | P-III | CORE V*-P | Mapping of Spatial Data Distribution | 4 | 4 | 40 | 60 | 100 |
| 23 | | CORE VI | Human Geography | 6 | 6 | 25 | 75 | 100 |
| 24 | | SECOND ALLIED II*-P | Climatic Diagram and Weather Map Interpretation | 2 | 2 | 40 | 60 | 100 |
| 25 | | SECOND ALLIED III | Regional Geography of Asia | 4 | 4 | 25 | 75 | 100 |
| 26 | P-IV | NME I | Non- Major Elective-I | 2 | 2 | 25 | 75 | 100 |
| TOTAL | | | | 18 | 18 | 155 | 345 | 500 |
| V SEMESTER | | | | | | | | |
| 27 | P-III | CORE VII | Fundamental of Remote Sensing | 6 | 5 | 25 | 75 | 100 |
| 28 | | CORE VIII | Geography of Tamil Nadu | 6 | 4 | 25 | 75 | 100 |
| 29 | | CORE IX | Settlement Geography | 6 | 4 | 25 | 75 | 100 |
| 30 | | CORE X-P | Quantitative Techniques and Map Interpretations | 4 | 4 | 40 | 60 | 100 |
| 31 | | ME II | Agricultural Geography | 4 | 4 | 25 | 75 | 100 |
| 32 | P-IV | NME II | Non- Major Elective-II | 2 | 2 | 25 | 75 | 100 |
| 33 | | SSD | Soft Skill Development | 2 | 2 | 25 | 75 | 100 |
| 34 | P - V | EA | | - | 1 | 25 | 75 | 100 |
| TOTAL | | | | 30 | 26 | 215 | 585 | 800 |
| VI SEMESTER | | | | | | | | |
| 35 | P-III | CORE XI | Geography of World Resources | 6 | 5 | 25 | 75 | 100 |
| 36 | | CORE XII | Biogeography | 6 | 6 | 25 | 75 | 100 |
| 37 | | CORE XIII | Basics of GIS and GPS | 5 | 4 | 25 | 75 | 100 |
| 38 | | CORE XIV-P | Map Projection and Surveying | 5 | 4 | 40 | 60 | 100 |
| 39 | | ME III | Geography of Population | 5 | 4 | 25 | 75 | 100 |
| 40 | P-IV | SBE III | Natural Regions of World | 2 | 2 | 25 | 75 | 100 |
| 41 | P - V | GE | Gender Equality | 1 | 1 | 25 | 75 | 100 |
| TOTAL | | | | 30 | 26 | 190 | 510 | 700 |
| GRAND TOTAL | | | | 168 | 134 | 1065 | 2835 | 3900 |

SEMESTER - I

| | | | |
|---------------|--------------------|--------------|------------------|
| CORE I | Climatology | Hrs.6 | Credits 6 |
|---------------|--------------------|--------------|------------------|

Objectives: At the end of the course students able to

1. Explain the process and importance of climatic phenomena.
2. Identify its impact of climate on human being and their activities.

UNIT – I

Climatology: Definition, Scope and contents - Weather and climate - Composition and structure of the Atmosphere - Heat Budget .

UNIT – II

Temperature: Horizontal and vertical distribution – Pressure Belts: Horizontal and vertical distribution- Winds: Types Planetary winds, Monsoon : Indian Monsoon - Local Winds - Jet Streams.

UNIT – III

Humidity: Types, Condensation, Forms - Fog - Clouds: Types - Precipitation: Forms, Types and Distribution - Air Masses - Front : Types.

UNIT – IV

Atmosphere Disturbance: Cyclone : Tropical cyclones, Temperate Cyclone , Anticyclone , Thunder Storms - Climatic Classification : Koppen's and Thorthwaith's.

UNIT – V

Impact of Climate on Society: Definition and characteristics of Micro and Macro Climate, Mountain Climate, Coastal Climate. Weather Forecasting and Source : Role of Meteorological stations, satellites and other sources.

References:

1. Trewartha. GT. (1968) Introduction to Climate McGraw Hill New York
2. Critch field H.J (1975) General Climatology, Prentice Hall New Delhi
3. Lal D.S. (1986) Climatology, Chaitanya Publishing House, Allahabad.
4. Smith Applied Climatology.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - I

| | | | |
|------|-------|------------------------------------|-----------|
| CORE | II*-P | Maps, scale and Landscape analysis | Credits 2 |
|------|-------|------------------------------------|-----------|

Objectives: *At the end of the course students able to*

- I. To make the students to understand the meaning and construction of scales.
- II. To familiarize the students with aspects of maps, enlargement and reduction and imaginary lines.
- III. To understand the measurement of distance and area.

UNIT – I :

SCALES: Meaning, Conversion of Scales – Construction of Simple Linear Scales, Comparative Scales, Diagonal Scales.

UNIT – II :

MAPS - Definition – Types and significance of map – Enlargement and Reduction of Maps: Square and Similar Triangular Methods .

UNIT – III

MEASUREMENT OF DISTANCE: Thread, Divider and Rotometer methods – Measurement of Area Square and Strip methods – Function of Planimeter.

UNIT – IV

REPRESENTATION OF RELIEF FEATURES : Contours – Interpolation of Contours, Representation of land forms.

UNIT-V

Stream analysis: Ordering and numbering – Stream order and Density of drainage basin.

1. Reference:

2. D.R. Khullar: Essentials of practical Geography.
3. Singh R.L. Elements of practical Geography
4. R.P.Misra and Ramesh Fundamentals of cartography.
5. Gopal Singh: Map work and practical.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - I

| | | | |
|-----------------------|---------------------|--------------|------------------|
| FIRST ALLIED I | Oceanography | Hrs.4 | Credits 4 |
|-----------------------|---------------------|--------------|------------------|

Objectives: At the end of the course students able to

1. Know about the important of the ocean.
2. Explain the features and available ocean resources in the ocean.

UNIT – I

Oceanography: Introduction - Distribution of Land and Water – Hypsometric Curve: Continental Shelf, Continental Slope, Deep Sea Plain, Oceanic Deeps and Submarine Canyons.

UNIT – II

Temperature: Factors, Distribution: Horizontal and Vertical - Salinity: Factors, Distribution: Horizontal and Vertical .

UNIT – III

Ocean currents: Pacific, Atlantic and Indian Ocean - El Nino and La Nina and their occurrence and effects.

UNIT – IV

Waves – Tides - Coral reefs: Formation, Types, Problems - Deposits in ocean floor – Marine resources.

UNIT – V

Applications: Marine Pollution; causes, consequences, mitigation and Recent issues.

References:

1. Oceanography for geographers, Sharma and Vittal.
2. The Times Atlas of the Oceans.
3. Oceanography Robert h. Boyer.
4. Samudhraviyal S. Subbiah

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - I

| | | | | |
|--------------|-------|---|--|------------------|
| FIRST ALLIED | II*-P | Diagrammatic Representation Data | | Credits 2 |
|--------------|-------|---|--|------------------|

Objectives: At the end of the course students able to

1. Draw the various proper diagrams according to available data.
2. Interpret diagrams properly.

UNIT – I

Graphs: Meaning and Format of Graph, Classification of Graph

UNIT – II

Simple line graph, Multi line - Bar Diagram, Multi Bar – Polygon - Band Graph.

UNIT – III

Bar diagrams: – Simple Bar, Multiple and Compound Bar diagram

UNIT – IV

Circular diagrams: – proportionate circles, Ring diagrams, and Sector or Pie diagrams

UNIT – V

Three dimensional diagrams: – Cubes, Block, Pile diagrams, sphere diagrams.

References:

1. D.R.Khullar: Essentials of practical Geography
2. Singh.R.L.Elements of practical Geography
3. R.P. Misra and Ramesh Fundamentals of cartography
4. Gopal singh: Map work and practical Geography.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - I

| | | | | |
|-----|----|---------------------------------|-------|-----------|
| SBE | II | Geography of Travel and Tourism | Hrs.2 | Credits 2 |
|-----|----|---------------------------------|-------|-----------|

Objectives: *At the end of the course students able to*

- 1 Identify the importance of tourism and its principles
- 2 Identify the potentiality of tourism centers and their problems.

UNIT –I

Scope of Travel and Tourism - Types of Tourism - Development in India - Tourism and Socioeconomic Importance - Factors Affecting Tourism Activities.

UNIT –II

Travel Agencies and their Functions -Travel Documents: Passport and Visa –Types – Tourist Facilities and Services – Entertainment, Trade, Fairs, Festival, Sports and Games.

UNIT –III

Accommodation: Significance and Role in Tourism Industry - Hotel Types, Motels, Choutries, Guest Houses, Youth Hostels – Tourist Guides.

UNIT- IV

Tourism Potentials of Tamil Nadu - Major Tourism centers of Tamil Nadu – Impact on Economy.

UNIT –V

Major Tourist centers of India – Selected Centers Only (Jaipur, Agra, Shimla, Ajanta and Ellora) - Important geographical tourist centers: Udgamandalam, Kodaikanal, Yercaud and Mysuru.

References:

1. Seth, P.N. and Bhat, S.S. (2012). *An Introduction to Travel and Tourism*. Sterling Publishers Private Ltd., New Delhi.
2. Bhatia, A. K., (2010), *Tourism Development – Principles and Practices*, Sterling Publishers Pvt. Ltd., New Delhi.
3. Ghosh, B. (2009). *Tourism and Travel Management (2nd Edition)*. Vikas Publishing House Pvt.Limited. New Delhi.
4. Bhatia, A.K. (2002). *Tourism Development: Principles and Practices*. Sterling Publishers Pvt.Limited, New Delhi.
5. Singh, A.P. (1989). *Himalayan Environment and Tourism*. Chugh Publications, Allahabad.
6. Kaul, R.N. (1985). *Dynamics of Tourism: A Trilogy*. Sterling Publishers Pvt. Limited, New Delhi.
7. Singh, S.N. (1985). *Geography of Tourism and Recreation with Special Reference to Varanasi*. Inter India Publication, New Delhi.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - II

| | | | | |
|------|-------|------------------------------------|-------|-----------|
| CORE | II*-P | Maps, scale and Landscape analysis | Hrs.4 | Credits 4 |
|------|-------|------------------------------------|-------|-----------|

Objectives: *At the end of the course students able to*

- I. To make the students to understand the meaning and construction of scales.
- II. To familiarize the students with aspects of maps, enlargement and reduction and imaginary lines.
- III. To understand the measurement of distance and area.

UNIT – I :

SCALES: Meaning, Conversion of Scales – Construction of Simple Linear Scales, Comparative Scales, Diagonal Scales.

UNIT – II :

MAPS - Definition – Types and significance of map – Enlargement and Reduction of Maps: Square and Similar Triangular Methods –.

UNIT – III

MEASUREMENT OF DISTANCE: Thread, Divider and Rotometer methods – Measurement of Area Square and Strip methods – Function of Planimeter.

UNIT – IV

REPRESENTATION OF RELIEF FEATURES – Contours – Interpolation of Contours, Representation of land forms.

UNIT-V

Stream analysis: Ordering and numbering – Stream order and density of drainage basin.

6. Reference:

7. D.R. Khullar: Essentials of practical Geography.
8. Singh R.L. Elements of practical Geography
9. R.P.Misra and Ramesh Fundamentals of cartography.
10. Gopal Singh: Map work and practical.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - II

| | | | | |
|------|-----|---------------|-------|-----------|
| CORE | III | Geomorphology | Hrs.6 | Credits 6 |
|------|-----|---------------|-------|-----------|

Objectives: At the end of the course students able to

- 1 Locate landform features and explain its formation
- 2 Explain process of formation of different land form features.

Unit –I: Geomorphology - Definition - Fundamental Concepts – Scope - Origin and evolution of the earth: view of Gaseous Hypothesis at Kant, Nebular Hypothesis at Laplace - Interior of the Earth Structure - Theory of Isostasy: Views of Pratt and Aries - Geological-time-scale.

Unit – II: Theory of Plate Tectonics - Wegener’s Theory of Continental drift -Earth Movements: Endogenetic Force: Sudden Force -Volcanoes: Components, Types of Eruptions, Volcanic Materials, Geographical Distribution and Major Volcanic Eruptions Occurred.

Unit – III: Earthquakes: Causes, Measuring Earthquake, Classification, Geographical Distribution and key earthquakes.–Rocks: Classification and Characteristics. – Relief Features: Mountain Building, Plateau and Plain.

Unit – IV: Diastrophic Movement: Epirogenetic Movement, Type –Orogenetic Movement: Folds: Types, Nappes – Theory of Geosynclines – Crystal Fracture: Fault, Type of Faults and Rift Valley – Exogenetic Force: Process of Weathering and Mass Movement.

Unit – IV: Drainage system and drainage patterns. – Denudation Process: Erosional, Transportational and Depositional Land forms of Fluvial, Karst.

Unit – V: Aeolian, Glacial and Coastal process of these and land forms produced– Application of Geomorphology.

References:

1. Dayal P. (1995) A Text Book of Geomorphology 2nd Edition.Sukla Book, Patna.
2. Kale. S Vishwas and Avijit Gupta, (2015), Introduction to geomorphology, Universities Press (I.) Pvt. Ltd.
3. Strahler ., A.N.&Strahler A. H. (1984) Elements of physical Geography. John Wiley
4. Savindra Singh (2007), Physical Geography, PrayagPustakBhawan, Allahabad.
5. Savindra Singh (2007), Geomorphology , PrayagPustakBhawan, Allahabad.
6. Richard H. Bryant (1976), 2015. Physical Geography Made Simple, Rupa Publication (I.) Pvt. Ltd., N. Delhi.
7. William D. Thorn bury.(2004) Principles of Geomorphology. CBS Publishers & Distributers Pvt. Ltd.
8. Woodridge S.W and R.S. Morgan (1991) An Outline of Geomorphology, The Physical Basis of Geography, Orient Longman, Kolkata.

U.G question paper pattern

Part :A Ten questions (two questions from each unit)

10x2 = 20 marks

Part :B Five questions (two questions from each unit- either or type)

5 x 5 = 25 marks

Part :C Three questions

3 x 10 =30 mark

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks

CIA – 25 marks

SEMESTER - II

| | | | |
|--------------------|---|--------------|------------------|
| FIRST ALLIED II*-P | Diagrammatic Representation Data | Hrs.2 | Credits 2 |
|--------------------|---|--------------|------------------|

Objectives: At the end of the course students able to

1. Draw the various proper diagrams according to available data.
2. Interpret diagrams properly.

UNIT – I

Graphs: Meaning and Format of Graph, Classification of Graph

UNIT – II

Simple line graph, Multi line - Bar Diagram, Multi Bar – Polygon - Band Graph.

UNIT – III

Bar diagrams: – Simple Bar, Multiple and Compound Bar diagram

UNIT – IV

Circular diagrams: – proportionate circles, Ring diagrams, and Sector or Pie diagrams

UNIT – V

Three dimensional diagrams: – Cubes, Block, Pile diagrams, sphere diagrams.

References:

1. D.R.Khullar: Essentials of practical Geography
2. Singh.R.L.Elements of practical Geography
3. R.P. Misra and Ramesh Fundamentals of cartography
4. Gopal singh: Map work and practical Geography.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - II

| | | | |
|------------------|-----------|-------|-----------|
| FIRST ALLIED III | Hydrology | Hrs.4 | Credits 4 |
|------------------|-----------|-------|-----------|

Objectives: *At the end of the course students able to*

- 1 Identify the importance of tourism and its principles
- 2 Identify the potentiality of tourism centers and their problems.

UNIT –I

Introduction: Global water budget - Types of Water- Meteoric, Juvenile, Magmatic and Sea Water; Hydrological Cycle and its Components; Water-Bearing Properties of Rocks - Precipitation Forms and Types.

UNIT –II

Ground Water Porosity, Permiability and Ground Water Level - Artesian Wells -Location and Distributions - Vertical Distribution of Water, Zone of Aeration and Zone of Saturation, Aquifers; Classification of Aquifers; concept of drainage basins and Groundwater Basins; Aquifer parameters, Rainfall Hydrographs.

UNIT –III

Theory of groundwater flow; Darcy's law and its Applications -Evapotranspiration Process of Transpiration - Measurement of Evapotranspiration Lysi Meter Method only.

UNIT- IV

Surface water: infiltration and soil moisture: The process of infiltration zones of sub surface water runoff: Factors affecting run off-Annual rainfall of India and Tamil Nadu.

UNIT –V

Physical and Chemical Properties of Water-Quality Criteria for Different Uses-Ground Water Provinces of India, hydrology of arid zones of India, hydrogeology of Wetlands - Groundwater Problems, Management and Water conservation - Rain water and Runoff Harvesting in Rural and Urban Areas.

References:

1. Chow V.T., Maidment D.R., Mays L.W., "Applied Hydrology", Mc Graw Hill Publications, New York, 1995.
2. Subramanya K., "Hydrology, Tata McGraw Hill Co., New Delhi, 1994.
3. Jay Rami Reddy.P, "Hydrology, Laximi Publications, New Delhi, 2004.
4. Richard J. and Charley – Indtoduction to Physical Hydrology – (edited), Ethuen and Co.Ltd., Reprinted in 1997.p.165(London).
5. John.C and C. Manning – Applied Principles of Hydrology, 3rd Edition, CBS. Publishers & Distributors, Delhi-1996.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - III

| | | | | |
|------|----|--------------------|-------|-----------|
| CORE | IV | Geography of India | Hrs.4 | Credits 4 |
|------|----|--------------------|-------|-----------|

Objectives: At the end of the course students able to

1. Explain the basic information and details about India
2. Explain the distribution of resources and wealth & related economic activities of India

UNIT – I

India: Location - A sub-continent Political boundaries - Physical division's characteristics. Climate- Types of Soil: Characteristics Distribution Soil Erosion and Conservation.

UNIT – II

Natural vegetation: Types - River systems Northern and Southern Rivers disputes- irrigation Types- Multipurpose River projects - Agriculture production: Food Crops, Commercial Crops, Beverage Crops and Horticulture - Agriculture Regionalization - Agricultural problems.

UNIT – III

Distribution and production: Mineral Resources: – Iron ore, Mica, Copper, Uranium Fuel resources: Coal, Petroleum, Natural Gas, Hydel, Non conventional Power Resources: – solar & wind. Industries Development Factors of Location Types of Industries Distribution and production of major Industries Iron and Steel Industries Cotton Textiles Sugar Industries Automobiles Ship Building Industries – Recent developments.

UNIT – IV

Transportation Roadways Types Railways and Water Ways and their distribution and Economic importance problems in the Water transportation – Ports – Classification – Distribution – Hinterland.

UNIT – V

Population growth – Distribution – Attributes: density Birth rate, Death rate Sex ratio Age structure Population problems and solution. Trade Pattern Characteristics Trend Trade Policies of India.

References:

1. Economic and Commercial Geography of India – C.P.Mamoria
2. Economic and Commercial Geography of India Sharma
3. A comprehensive geography of India – Khullar.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - III

| | | | | |
|------|------|--------------------------------------|-------|-----------|
| CORE | V*-P | Mapping of Spatial Data Distribution | Hrs.2 | Credits - |
|------|------|--------------------------------------|-------|-----------|

Objectives: At the end of the course students able to

1. Identify and draw various signs symbols of the map.
2. Draw different thematic maps according to the available data.

UNIT – I

Maps: Essentials of a Map, Classification of Maps, Uses of Maps -Data-Types: Source Types, Spatial, Non Spatial, Quantitative and Qualitative.

UNIT – II

Distribution Maps: Methods, Quantitative Methods: Dot Maps: Mono and Multiple, Isopleth, Choropleth.

UNIT– III

Qualitative Method: Choroschematic Method – Chorochromatic Method

UNIT – IV

Located Maps: Line Graph, Bar Graph, Circle, Pie Diagrams.

Unit-V-

Located Maps: Sphere, Block Diagrams, Pictorial Maps - Flow maps.

References:

1. D.R. Khullar(2002), Essentials of Practical Geography, New academic Publication Co., Jalandhar.
2. L.R. Singh (2006), Elements of Practical Geography, ShardaPustakBhawan, Allahabad.
3. R.P. Misra, R.B. Singh, BrijeshMisra and AnupamPandey (2014), Fundamental of Cartography, Concept Publishing Co. Pvt. Ltd., N.Delhi.
4. R.P.Misra and Ramesh – Fundamentals of Cartography.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - III

| | | | |
|-----------------|------------------------------------|--------------|------------------|
| SECOND ALLIED I | Fundamentals of Cartography | Hrs.4 | Credits 4 |
|-----------------|------------------------------------|--------------|------------------|

Objectives: At the end of the course students able to

1. Identify the use and importance Maps.
2. Conduct survey and able classify maps

Unit-I

Cartography : Definition ,Scope and Content. Maps – Definition , types and uses- Growth, development of cartography

Unit-II

Map Scales;- Definition of map scales – Enlargement and Reduction - Direction and Bearing – Co-ordinate Systems

Unit-III

Map Data;- Collection and Classification – Base Map – Compilation – Generalization.

Unit-IV

Symbolization: Types of Cartographic symbols- Point , Line and Area symbols- Map Designing and Layout – Mechanics of Map Constriction;- Drawing Materials, Equipments and Instruments

Unit-V

Map Reproduction- Processes of map production – Photographic systems- Multiple Reproduction processes- Computer application in Cartography- Computer Mapping – Remote Sensing, GIS and GPS.

Reference

1. Misra R.P. and A.P.Ramesh- Fundamentals of Cartography
2. Robinson – Elements of Cartography
3. Keats J.S. Cartographic Design and Production
4. Raiz- Principles of Cartography

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - III

| | | | |
|--------------------------------|--|--------------|------------------|
| SECOND ALLIED II*-P | Climatic Diagram and Weather Map Interpretation | Hrs.2 | Credits - |
|--------------------------------|--|--------------|------------------|

Objectives: At the end of the course students able to

1. Draw the proper climatic diagram for the available climatic data.
2. Read the weather map and forecast the weather.

UNIT – I

Climatic Diagrams – types of climatic diagrams, weather maps: definition and types.

UNIT – II

Weather data Source - Simple climatic diagrams: Simple line graph, Poly graph - Isopleths Maps (Isotherm, Isobar, Isohyets).

UNIT – III

Diagram: – Climograph, Hythergraph, Ergo graph and Climatographs – Construction and uses.

UNIT – IV

Wind Roses: Simple wind rose , Star Diagrams, Compound wind rose, Octagonal wind rose - Rainfall Dispersion diagrams - Construction and uses.

UNIT – V

Weather symbols - Station Model - Interpretation of Indian Daily Weather Maps(All seasons).

References:

1. D.R.Khullar: Essentials of practical Geography
2. Singh.R.L.Elements of practical Geography
3. R.P. Misra and Ramesh Fundamentals of cartography
4. Gopal singh: Map work and practical Geography.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - III

| | | | | |
|----|---|---|--------------|------------------|
| ME | I | Land use and Cadastral Surveying | Hrs.4 | Credits 4 |
|----|---|---|--------------|------------------|

Objectives: At the end of the course students able to

1. Identify the use Landuse classification and importance.
2. Conduct survey and able classify land uses and Recent trends.

Unit I

Land use: Definition, Fundamental Concepts – Scope – Approaches - Cadastral Mapping: Definition, Fundamental Concepts, Scope, Methods, Importance and Uses – Source of Land Use and Cadastral Mapping Data and Maps.

Unit II

Land use classification– Land use Classification in India – Land Utilization in India - Land Information System: Importance of Land Information System in India, Need for a Modern Land Information System - Land use Planning: Land Use Planning in India.

Unit III

Cadastral Survey - Cadastral Mapping in India: Significant and Uses – Need to Modernizing Cadastral Surveys: Scale, Projection and Techniques - Cadastral Maps and their Uses: National Policy on Land Records – Institutions Responsible for Cadastral Surveys – Management of Land Records in India – Computerization of Land Records in India -

Unit IV

Techniques in Land use Survey and Mapping: Geodetic and Plane Surveying – Techniques of Cadastral Mapping: Procedures and Instruments Used in Cadastral Surveying - Land Use Resource Measurement – Land information Management (LIM).

Unit V

Role of Remote Sensing, GIS, GPS, GOOGLE Map in Land use and Cadastral Surveying and Mapping - Land use and Cadastral Mapping Satellites: Resource Management and Application - Land Use Classification and Remote Sensing.

Reference:

1. Anjy Reddy, Remote sensing & GIS
2. Chishon, Rural settlements Landuse, Hatchinsen University.
3. Freeman T N , Geography and Planning, Hatchinsen University
4. Kullar, D.R (2012), India, A Comprehensive Geography, Kalyani Publishers, Ludhiana.
5. Mandal R B, Land utilization: theory and practice, concept publishing company.
6. Misra. R.P., R.B. Singh, BrijeshMisra and AnupamPandey (2014), Fundamental of Cartography, Concept Publishing Co. Pvt. Ltd., N.Delhi.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - III

| | | | | |
|-----|----|----------------------------|-------|-----------|
| SBE | II | Basics of Disaster Studies | Hrs.2 | Credits 2 |
|-----|----|----------------------------|-------|-----------|

Objectives: *At the end of the course students able to*

1. Identify various disasters and its impact.
2. Manage natural hazards and will provide proper suggestions for Disaster reduction .

Unit – I

Disasters – Meaning and Concept – Types.

Unit – II

Planetary Hazards : Terrestrial hazards – earthquake hazards – Hazardous effects of earthquake – Earthquake hazards in India.

Unit –III

Volcanic hazards : Hazardous effects of volcanic eruptions – Environmental Impacts of volcanic eruptions.

Unit –IV

Atmospheric or Exogenous hazards – Destruction by Tropical cyclones and local storms – Floods – Droughts.

Unit - V

Man Induced hazards – social response to hazards – Natural Disaster reduction and Management.

References:

1. A Text Book of environmental science . S.S. Purohit , Q. J. Sharamani and A.K.Agarwal.
2. Environmental Pollution (Tamil) P. Chadrakaran.
3. Environmental Geography – Savindra Singh.
4. Introduction to Environmental science – V. Anjaneyelu.
5. Environmental Problems and solutions – B.K. Sharma, Kaur.

U.G question paper pattern

Part : A Ten questions (two questions from each unit) 10x2 =20 marks

Part : B Five questions (two questions from each unit- either or type) 5 x 5 = 25 marks

Part : C Three questions 3 x 10 =30 mark

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks

CIA – 25 marks

Total – 100 Marks

SEMESTER - IV

| | | | | |
|------|------|--------------------------------------|-------|-----------|
| CORE | V*-P | Mapping of Spatial Data Distribution | Hrs.4 | Credits 4 |
|------|------|--------------------------------------|-------|-----------|

Objectives: At the end of the course students able to

1. Identify and draw various signs symbols of the map.
2. Draw different thematic maps according to the available data.

UNIT – I

Maps: Essentials of a Map, Classification of Maps, Uses of Maps -Data-Types: Source Types, Spatial, Non Spatial, Quantitative and Qualitative.

UNIT – II

Distribution Maps: Methods, Quantitative Methods: Dot Maps: Mono and Multiple, Isoleth, Choropleth.

UNIT– III

Qualitative Method: Choroschematic Method – Chorochromatic Method

UNIT – IV

Located Maps: Line Graph, Bar Graph, Circle and Pie Diagrams.

Unit-V-

Located Maps: Sphere, Block Diagrams, Pictorial Maps - Flow maps.

References:

1. D.R. Khullar(2002), Essentials of Practical Geography, New academic Publication Co., Jalandhar.
2. L.R. Singh (2006), Elements of Practical Geography, ShardaPustakBhawan, Allahabad.
3. R.P. Misra, R.B. Singh, BrijeshMisra and AnupamPandey (2014), Fundamental of Cartography, Concept Publishing Co. Pvt. Ltd., N.Delhi.
4. R.P.Misra and Ramesh – Fundamentals of Cartography.

For U G Practical, Five questions without choice is the common pattern.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - IV

| | | | | |
|------|----|------------------------|--------------|------------------|
| CORE | VI | Human Geography | Hrs.6 | Credits 6 |
|------|----|------------------------|--------------|------------------|

Objectives: *At the end of the course students able to*

- 1 Identify the importance of tourism and its principles
- 2 Identify the potentiality of tourism centers and their problems.

UNIT –I

Nature and Scope of Human Geography - Man and Environmental Relationship – Concepts – Determinism, Possibilism, Neo-Determinism and Probalism.

UNIT –II

The First People; The Pygmies, Badawins, Eskimos, Kirghiz, Bushmen, Aborigines - Race: Major Races - Caucasoid, Mongoloid and Negroid; Racial conflicts and racial prejudice.

UNIT –III

Religion: Distribution of world Religion: Hinduism, Christianity, Islam, Buddhism and Judaism- Languages: Major World languages and their Distribution.

UNIT- IV

Migration: Types, Causes and Consequences, Current Trends, Ravenstien and Lee theory of migration.

UNIT –V

Cultural Diffusion: Meaning and Elements –Types of Diffusion - Cultural Hearths: Major cultural Hearths of the world - Cultural Realms: Meaning and Bases of Delimitation Major Cultural Worlds.

References:

1. Balbeer Singh Negi, (2006), Human Geography- An Ecological approach, Kedarnath and Ramnath Publication, Meerut.
2. Majid Hussain (1999), Human Geography, Rawat Publications, Jaipur.
3. Money D.C (1967), Introduction to Human Geography, University Tutorial Press, London.
4. Goh Chengleong and Morgan (1975), Human and Economic Geography, Oxford University Press, London.
5. Husian, M. (2011). *Human Geography*. Rawat Publication, New Delhi.
6. Trewarta, G.T. (1969). *A Geography of Population: World Patterns*. John Wiley & Sons, New York.
7. Chandna, R.C. (2010). *Population Geography*, Kalyani Publisher, New Delhi.
8. Hassan, M.I. (2005). *Population Geography*, Rawat Publications, Jaipur.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - IV

| | | | |
|------------------------|--|--------------|------------------|
| SECOND ALLIED II*-P | Climatic diagram and Weather Map Interpretation | Hrs.2 | Credits 2 |
|------------------------|--|--------------|------------------|

Objectives: At the end of the course students able to

1. Draw the proper climatic diagram for the available climatic data.
2. Read the weather map and forecast the weather.

UNIT – I

Climatic Diagrams – types of climatic diagrams, weather maps: definition and types.

UNIT – II

Weather dataSource. - Simple climatic diagrams, Simple line graph, Poly graph - Isopleths Maps (Isotherm, Isobar, Isohyets).

UNIT – III

Diagram: – Climograph, Hythergraph, Ergo graph and Climatographs – Construction and uses.

UNIT – IV

Wind Roses: Simple wind rose , Star Diagrams, Compound wind rose, Octagonal wind rose - Rainfall Dispersion diagrams - Construction and uses.

UNIT – V

Weather: symbols , Station Model - Interpretation of Indian Daily Weather Maps(All seasons).

References:

5. D.R.Khullar: Essentials of practical Geography
6. Singh.R.L.Elementsof practical Geography
7. R.P. Misra and Ramesh Fundamentals of cartography
8. Gopal singh: Map work and practical Geography.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - IV

| | | | |
|-------------------|----------------------------|-------|-----------|
| Second Allied III | Regional Geography of Asia | Hrs.4 | Credits 4 |
|-------------------|----------------------------|-------|-----------|

Objectives: *At the end of the course students able to*

- 1 Identify the importance of tourism and its principles
- 2 Identify the potentiality of tourism centers and their problems.

UNIT –I

Asia : Physiographic Divisions – Climate - Drainage Systems - Significance of Geographical Locations - Vegetation.

UNIT –II

Agricultural Resources of Asia: Food Crops: Rice and Wheat - Cash Crops: Sugarcane and Tobacco - Plantation Crops: Tea, Coffee-Fiber Crops: Cotton and Jute.

UNIT –III

Mineral Resources: Distribution and Production of Iron Ore, Tin, Manganese, Bauxite and Mica - Energy Resources: Distribution and Production of Coal, Petroleum, Natural Gas and Atomic.

UNIT- IV

Industries: Distribution and Production: Iron and Steel – Cotton Textiles – Cement - Industrial Regions of Asia - Transport.

UNIT –V

Population: Growth, Distribution and Density of Population and Problems- Trade and Commerce.

References:

1. Leong, C.H. and Morgan, G.C. (1982). *Economic and Human Geography (2nd Edition)*. Oxford University Press, Kuala Lumpur.
2. Tirtha, R. (2001). *Geography of Asia*. Rawat Publications, New Delhi.
3. Manku, D.S. (2010). *A Regional Geography of the World*. Kalyani Publishers, New Delhi
4. Stamp, L.D. (1969). *Asia: A Regional and Economic Geography*. Methuen Publications, London.
5. Tiwari, S.K. (1975). *Geography of Asia*. Kedarnath and Ramnath, Meerut.
6. Shafi, M. (2000). *Geography of South Asia*. MacMillan and Co., Kolkata.
7. Dudley Stamp (1979), *Asia – A regional and economic Geography*, Orient B.I. publisher's Pvt Limited, New Delhi.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

Non- Major Elective-I

| | | | | |
|-----|---|------------------------------------|--------------|------------------|
| NME | I | Fundamentals of Cartography | Hrs.2 | Credits 2 |
|-----|---|------------------------------------|--------------|------------------|

Objectives: At the end of the course students able to

1. Study fundamentals of cartography and map elements.
2. Know mapping techniques and map projections.

UNIT – I

Cartography – Nature and Scope – Arts and Science – Cartography as a communication

UNIT – II

Maps – Map elements – Point – Line and Area; Map classification and their uses.

UNIT – III

Mapping techniques – Qualitative and Quantitative – Scales – Types of scale

UNIT – IV

Coordinate system – Latitude and Longitude – Map Compilation - Generalization of Maps

UNIT – V

Map projection –Principles - Classification – Limitations and Uses of map projection

REFERENCES:

1. Misra R.P. and A.P.Ramesh – Fundamentals of Cartography
2. Robinson Elements of Cartography
3. Keats J.S. Cartographic Design and Production
4. Raiz – Principles of Cartography.

Question Pattern

5 out of 8 questions, 05x15 =75 marks

SEMESTER - V

| | | | | |
|------|-----|--------------------------------|-------|-----------|
| CORE | VII | Fundamentals of Remote Sensing | Hrs.6 | Credits 5 |
|------|-----|--------------------------------|-------|-----------|

Objectives: At the end of the course students able to

1. Explain the principles of remote sensing.
2. Explain the use of remote sensing in Geography.

UNIT – I

Remote sensing: Definition- Developments - Components - Electro Magnetic Radiation – Platforms – sensor and radiation records

UNIT – II

aerial remote sensing: Types of aerial photographs – Scales – Films – Filters – Cameras; Satellite remote sensing: - IRS and LANDSAT satellites - Types of resolutions - Bands.

UNIT – III

Fundamentals of image interpretation - Visual image interpretation - image interpretation keys.

UNIT – IV

Image processing:- Image rectification – Image enhancement - Supervised and unsupervised classification

UNIT – V

Applications of remote sensing in Land use / land cover, Agriculture, Water resource and Environmental Assessment.

References:

1. H. Robinson, Joel L. Morrison Elements of cartography
2. Lilly sand Remote sensing and image interpretation.
3. Dickinson G.C. Maps and air photography.

U.G question paper pattern

Part : A Ten questions (two questions from each unit) 10x2 =20 marks

Part : B Five questions (two questions from each unit- either or type) 5 x 5 = 25 marks

Part : C Three questions 3 x 10 =30 mark

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks

CIA – 25 marks

Total – 100 Marks

SEMESTER - V

| | | | | |
|------|------|-------------------------|-------|-----------|
| CORE | VIII | Geography of Tamil Nadu | Hrs.6 | Credits 4 |
|------|------|-------------------------|-------|-----------|

Objectives: At the end of the course students able to

1. Explain the distribution of natural resources of Tamil Nadu
2. Explain problems and prospectus of Tamil Nadu.

UNIT – I

Location- Administrative Divisions- Physiographic - Drainage – Climate - Soil - Natural Vegetation.

UNIT – II

Irrigation: Types and Importance - Agriculture Distribution and production of Rice, Cotton, Sugarcane, Tea, Groundnut.

UNIT – III

Power Resources: Hydel, Thermal, Wind Power Distribution. Mineral resources Bauxite and Lime stone Iron ore and coal.

UNIT – IV

Distribution and Production: Cotton, Textile, Automobile, Cement and Leather Industries.

UNIT – V

Population: Growth and Distribution - Transport: Road, Rail, and Air Major Ports.

References:

1. Geography of Tamil Nadu V. Kumarasamy (Tamil)
2. Resource Atlas of Tamil Nadu University of Madras.

U.G question paper pattern

Part : A Ten questions (two questions from each unit) 10x2 =20 marks
Part : B Five questions (two questions from each unit- either or type) 5 x 5 = 25 marks
Part : C Three questions 3 x 10 =30 mark

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - V

| | | | | |
|------|----|-----------------------------|--------------|------------------|
| CORE | IX | Settlement Geography | Hrs.6 | Credits 4 |
|------|----|-----------------------------|--------------|------------------|

Objectives: At the end of the course students able to

1. Explain the formation and principles of settlements.
2. Explain the distribution, pattern, and characteristics of settlements.

UNIT – I

Settlement Geography: natural and scope - origin- site and situation – classification of settlement

UNIT – II

Rural Settlement: – Growth and Development, Characteristics site and Situation settlement, Distribution: cluster and dispersed- Function Classification - Patterns: – rectangular, Linear, Circular, Semicircle, Star, Triangular, Nebular, .

UNIT – III

Spatial Characteristics of Rural Settlements - Structure of rural Settlements: House, Forms and characteristics Indian Rural Settlement

UNIT – IV

Urban Settlement: – Origin and Growth of towns and cities site and situation - classification of urban settlements: functional and hierarchical, Urban Morphology and Theories: Concentric, sector, Multinuclei and Christaller's central Place theory.

UNIT – V

Urbanization: Growth, Urban Expansion: Vertical and Horizontal: Urban sprawl Urban Fringe, Sub Urban, hinterland, Satellite towns, central Business District (CBD)- city classification - Urban Problems.

References:

1. Majid Hussain: Human Geography.
2. Human Geography Balbir Negi.

U.G question paper pattern

Part : A Ten questions (two questions from each unit) 10x2 =20 marks
Part : B Five questions (two questions from each unit- either or type) 5 x 5 = 25 marks
Part : C Three questions 3 x 10 =30 mark
(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - V

| | | | | |
|------|-----|--|--------------|------------------|
| CORE | X-P | Quantitative Techniques and Map Interpretations | Hrs.4 | Credits 4 |
|------|-----|--|--------------|------------------|

Objectives: *At the end of the course students able to*

1. Select appropriate quantitative techniques for representing the data.
2. Identify and interpret features from aerial photographs.

UNIT – I

Measure of central Tendency: Mean Median and Mode – Standard Deviation.

UNIT - II

Frequency Distribution: Histogram – frequency Curve – Ogive Curve - Scatter Diagram – Simple correlation – Rank correlation.

UNIT – III

Conventional signs and Symbols: – Types and numbering of Indian Topographical sheets – Interpretation of Indian Topographical Maps. Correlation between Physical features and settlements.

UNIT - IV

Interpretation of Aerial Photographs

Unit-V

Interpretation of Satellite Imageries.

References:

1. D.R.Khullar: Essentials Of practical Geography.
2. Singh R.L: Elements of Practical Geography.
3. Gopal singh: Map Work and practical Geography.

For U G Practicals, **Five questions** without choice is the common pattern.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER- V

| | | | | |
|----|----|------------------------|---------|-----------|
| ME | II | Agricultural Geography | Hours 4 | Credits 4 |
|----|----|------------------------|---------|-----------|

Objectives: At the end of the course students able to

- 1 Explain the features of agriculture.
- 2 Explain prospectus of agriculture geography

UNIT – I

Nature – Scope and significance of Agricultural Geography –Origin of Agriculture: Genecenters of Agriculture – Physical Factors and Non-physical Factors.

UNIT – II

Land use classification in India – Soil types and distribution in India – Irrigation: Types and distribution in India.

UNIT – III

Models in Agricultural Geography: Von Thunan model of Agricultural location - Agricultural systems of the World – A review of Whittlesey’s Agricultural classification.

UNIT – IV

Crop distribution in India: Paddy, Wheat, Ground Nut, Coconut, Banana, Suger Cane, Cotton, Jute, Tea and Coffee.

UNIT – V

Agro-Climatic Region in India – Green revolution in India and Modernization – Indian Agricultural Problems.

References:

1. Jabir Saingh K. Dhillon S, S. 1984 – Agricultural Geography, Tata McGraw Hill, New Delhi.
2. Hussian. M 1979 – Systematic Agricultural Geography Rawat Publication Jaipur, New Delhi.
3. Mohamed N 1981 – Perspective Agricultural Geography, vol. I, Concepts publishing.
4. Tiwari R.C., Geography of India, prayag Pustak Bhawan, Allahabad.

P.G Question Paper Pattern (SEM.: 75 marks + CIA: 25 marks = Total: 100 marks)

| | | |
|-------------|---|-------------------|
| Section – A | Ten questions (two questions for each unit) | 10 x 2 = 20 marks |
| Section – B | Five questions (two questions for each unit – either or type) | 5 x 5 = 25 marks |
| Section – C | Three questions (out of five one question from each unit) | 3 x 10 = 30 marks |

Non- Major Elective-II

| | | | | |
|-----|----|---|--------------|------------------|
| NME | II | Basics of GIS and GPS Techniques | Hrs.2 | Credits 2 |
|-----|----|---|--------------|------------------|

Objectives: At the end of the course students able to

1. Know about the basics of GIS & GPS.
2. Use GIS & GPS for spatial data analysis.

UNIT – I

Geography and Information technology: Definition - Components and Capabilities of GIS.

UNIT – II

Data base: Spatial and Attribute data –Sources of data - Maps – Aerial photos – Satellite images – Census and Other government reports

UNIT – III

Data models: Geo-reference – Representation of data – Raster and Vector (point, line and area) – Digitization.

UNIT – IV

Data analysis: Queries – Buffering – Map overlay – Isolines – DEM – TIN

UNIT – V

Global Positioning System – Development – Segments – Space – Control and User; GPS Applications – Location and Tracking

REFERENCES:

1. Kang – Sung Chang (2002): Introduction to Geographic Information System. Tata McGraw Hill Publishing Company lit. New Delhi.
2. Peter A. Burrough and Rachael A. Medonnell (1998): Principals of Geographic Information System. Oxford University Press, New York.
3. Anand P.H. (2003): Principles of Remote Sensing and GIS, Srivenkateswara publishers, Kumbakonam.

Question Pattern

5 out of 8 questions, 05x15 =75 marks

SEMESTER - VI

| | | | | |
|------|----|------------------------------|-------|-----------|
| CORE | XI | Geography of World Resources | Hrs.6 | Credits 5 |
|------|----|------------------------------|-------|-----------|

Objectives: *At the end of the course students able to*

1. Know about distribution of natural resources.
2. Identifies the importance and utilization of resources for the development activities.

UNIT I

Resources :- concept, Scope and Content - Classification of Resource, Conservation and management of resources - Soil resources;- classification and distribution, fertility, soil erosion and conservation. Forest resources;- types and distribution, economic importance of forest.

UNIT II

Agricultural resources;- types, production and distribution of rice, wheat, tea, coffee, cotton and sugarcane – white revolution and blue revolution.

UNIT III

Mineral resources:-World distribution of minerals, Classification of mineral resources. Distribution and production of Iron ore, Manganese, Bauxite, gold and silver. Power resources: Distribution of Coal, Petroleum, Hydel, Thermal and Nuclear Power Resources.

UNIT IV

Industrial resources:- distribution and production of Iron & Steel, Ship Building, Automobile, Chemical, Aircraft, Cotton textile, Paper and Jute Industry. Distribution of major industries of the world

UNIT V

Transport System :- Road, Rail, Air and Water Ways. Trade;- International Trades and Trade Organization of WTO, GATT, ITO.

References:

1. Economic and Commercial Geography – K.K. Khanna & V.K. Gupta.
2. Alexander :- Economic Geography
3. Zimm Man:-World resources and industries
4. Goh Chang Leong:-Human and Economic Geography

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - VI

| | | | | |
|------|-----|---------------------|--------------|------------------|
| CORE | XII | Biogeography | Hrs.6 | Credits 6 |
|------|-----|---------------------|--------------|------------------|

Objectives: At the end of the course students able to

1. Know about principles and processes going on in our environment.
2. Identifies the importance animals and plants.

UNIT – I

Biogeography: Nature, Scope, Significance and development – Biogeography Paleo biogeography – Environment, habitat and plant animal association, Biome types

UNIT – II

Darwin theory of evolution laws of thermodynamics – Bio-geo – chemical cycle, tropic level, Food chain, Food web

UNIT – III

Concept of Biome, Ectone and community – Concept of ecosystem , energy flow in ecosystem – Types of ecosystem: – Forest, Grassland, Desert and Marine – Ecological balance, conservation and management.

UNIT – IV

Elements of plant Geography: Distribution of forest and major communities – Distribution of major animal grouping in the world.

UNIT – V

Deforestation causes and consequences – Pollution types and their effects – Significance of biodiversity and controlling factors.

References:

1. Agarwal D P, Man and environment in India through ages, Books & books India.
2. Bradshaw M J, Earth and living planet, ELBS, London.
3. Cox C D and Moore P D. Biogeography, an ecological and volutionary approach, Blackwell.
4. Gaur R, Environment and ecology of early man in northern India, RB Publication Corporation.
5. Hoyt J B, Man and earth, Prentice Hall, USA.
6. Mathus H S, Essentials of Biogeography, Anuj printers, Jaipur.
7. Peras N, Basic Biogeography, Longman, London
8. Simmon I G, Biogeography, Natural and cultural, Longman.

U.G question paper pattern

| | | |
|----------|---|------------------|
| Part : A | Ten questions (two questions from each unit) | 10x2 =20 marks |
| Part : B | Five questions (two questions from each unit- either or type) | 5 x 5 = 25 marks |
| Part : C | Three questions | 3 x 10 =30 mark |

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - VI

| | | | | |
|------|------|-----------------------|-------|-----------|
| CORE | XIII | Basics of GIS and GPS | Hrs.5 | Credits 4 |
|------|------|-----------------------|-------|-----------|

Objectives: At the end of the course students able to

3. Know about the principles of GIS.
4. Use GPS for spatial data analysis.

UNIT – I

Geographic Information System: Definition - Development - Basic concepts –Components - Potential of GIS.

UNIT – II

Database: Types of data - Spatial and Attribute data - Sources of Spatial and Attribute Data: Maps, Aerial photographs, Satellite Imageries, Census and Other Govt. Reports.

UNIT – III

Data models: Geo – referencing - Vector and Raster Data - Representation of Point, Line and Area features – Digitization - advantages and disadvantages of vector and raster data.

UNIT – IV

Data analysis: Tools of GIS: Query, Buffer, Map overlay, Distance measures and Generation of Isolines - DEM and TIN.– GIS packages: Raster and Vector based GIS packages

UNIT – V

Global Positioning System (GPS) – Developments - Segments: Space, Control and User - Applications of GPS: Location, Navigation, Tracking, Mapping, Surveying and Timing

References:

1. Kang – Sung Chang (2002): Introduction to Geographic Information System. Tata McGraw Hill Publishing Company lit. New Delhi.
2. Peter A. Burrough and Rachael A. Medonnell (1998): Principals of Geographic Information System. Oxford University Press, New York.
3. Anand P.H. (2003): Principles of Remote Sensing and GIS, Srivenkateswara publishers, Kumbakonam.

U.G question paper pattern

Part : A Ten questions (two questions from each unit) 10x2 =20 marks
Part : B Five questions (two questions from each unit- either or type) 5 x 5 = 25 marks
Part : C Three questions 3 x 10 =30 mark

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - VI

| | | | |
|------------|------------------------------|-------|-----------|
| CORE XIV-P | Map Projection and Surveying | Hrs.5 | Credits 4 |
|------------|------------------------------|-------|-----------|

Map Projection and Surveying

Objectives: At the end of the course students able to

1. Know to transfer whole or part of earth to a plane surface with suitable projection.
2. Conduct survey for primary data collection

UNIT – I

Map Projections General principles Classification choice of projection: – Construction of the following projection with limitation and uses. Zenithal Equidistant, Zenithal Equal area, Gnomonic, Stereographic, Orthographic. Cylindrical Equidistant, cylindrical equal area and Mercator's.

UNIT – II

Conical projection with one standard and two standard parallel, Bonne's Projection, Polyconic Projection.

UNIT – III

International projection. Conventional projections: Sinusoidal, Mollweide's (normal) Interrupted sinusoidal, Interrupted Mollweide's projection.

UNIT – IV

Surveying: Simple exercises using chain, Prismatic compass and clinometer.

UNIT – V

Surveying: Simple Exercises using Dumpy Level, Plane Table and Abney Level.

Note: Practical exam should be conducted at the same semester

References:

1. D.R. Khullar: Essentials of Practical Geography.
2. Singh. R.L. Elements of Practical Geography
3. R.P. Misra and Ramesh Fundamentals of Cartography.
4. Gopal Singh: Map Work and Practical Geography.
5. Zamir alive: A Text a Book of Practical Geography.

- Five questions without choice is the common pattern.

SEM – 60 marks
CIA – 40 marks
Total – 100 Marks

SEMESTER - VI

| | | | | |
|----|-----|-------------------------|-------|-----------|
| ME | III | Geography of Population | Hrs.5 | Credits 4 |
|----|-----|-------------------------|-------|-----------|

Objectives: At the end of the course students able to

1. Know the factors influencing distribution of population.
2. Know population problems and causes of population explosion.

UNIT – I

Population Geography Nature & Scope Development of population Geography population data sources and methods of collection

UNIT – II

Population Growth Distribution of population, Density and factors controlling problems.

UNIT – III

Composition of population Demographic Structure – Rural and Urban population Composition – major races.

UNIT – IV

Migration Types causes and effects of population.

UNIT – V

Population policy with reference to India over population, under population and **problems**.

References:

1. Ghosh. B.N. (1987): Fundamentals of Population Geography, Sterling Publishers Ltd., New Delhi.
2. Clarke John. I. (1981): Introduction to Demography, Surjeet Publication, New Delhi.
3. Hornby William (1986): An Introduction to Population, Cambridge. University Press, London
4. Glenn. T. Trewartha: Geography of Population World pattern, John Willey and Sons Publications.

U.G question paper pattern

Part : A Ten questions (two questions from each unit) 10x2 =20 marks
Part : B Five questions (two questions from each unit- either or type) 5 x 5 = 25 marks
Part : C Three questions 3 x 10 =30 mark

(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

SEMESTER - VI

| | | | | |
|-----|-----|--------------------------|-------|-----------|
| SBE | III | Natural Regions of World | Hrs.2 | Credits 2 |
|-----|-----|--------------------------|-------|-----------|

Objectives: At the end of the course students able to

1. Know about characteristics of natural regions of the world.
2. Identifies the importance and utilization of resources of different regions.

UNIT – I

North America: Physical divisions; Mountains- Plato- Plain – Climate- Drainage- Deserts- Natural Regions of Vegetation.

UNIT – II

South America: Physical divisions; Mountains- Pleatu- Plain – Climate- Drainage- Deserts- Natural Regions of Vegetation.

UNIT – III

Europe: Physical divisions; Mountains -Pleatu- Plain – Climate- Drainage- Deserts- Natural Regions of Vegetation.

UNIT - IV

Africa: Physical divisions; Mountains- Pleatu- Plain – Climate- Drainage- Deserts- Natural Regions of Vegetation.

UNIT - V

Australia: Physical divisions; Mountains- Pleatu- Plain – Climate- Drainage- Deserts- Natural Regions of Vegetation.

Reference

1. Douglas I. Johnson, Viola Haarmann, Merrill L Johnson, David L. Clawson , World regional geography, PHI Learning Pvt. Ltd.
2. E.M Bridges , World Geomorphology, Cambridge University Press, Cambridge.
3. Saul Israel, Douglas john son, Denis Wood World Geography Today, Holt Rinehart and Winston, New York.

U.G question paper pattern

Part : A Ten questions (two questions from each unit) 10x2 =20 marks
Part : B Five questions (two questions from each unit- either or type) 5 x 5 = 25 marks
Part : C Three questions 3 x 10 =30 mark
(3 out of 5 questions - one question is compulsory from each unit)

SEM – 75 marks
CIA – 25 marks
Total – 100 Marks

| | | | | | |
|----------|------------------------|-------|---|--------|---|
| SEMESTER | NON MAJOR ELECTIVE-III | Hours | 2 | Credit | 2 |
|----------|------------------------|-------|---|--------|---|

Geography of India

Objectives: *At the end of the course students able to*

1. Explain the basic information and details about India
2. Explain the distribution of resources and wealth & related economic activities of India

UNIT –I

India – Location –A sub Continent – Physical divisions. Climate – Rainfall distribution – Monsoons : Branches – Impact on economy - Rivers - Types of Soil : Characteristics – Distribution.

UNIT –II

Natural vegetation – Types and distribution – Distribution of Major crops – Rice, Wheat, Cotton, Jute, Coffee, Tea, - Agricultural problems.

UNIT –III

Distribution and production of Mineral Resources:- Iron ore , Mica, Copper, Uranium - Fuel resources: Coal, Petroleum, Natural Gas, Hydel – Distribution and production of major Industries - Iron and Steel Industries - Cotton Textiles – Sugar Industries – Automobiles – Ship Building Industries.

UNIT –IV

Transportation – Roadways – Types – Railways and Water Ways and their distribution.

UNIT –V

Population growth- Distribution- density – Population problems - Trade

References:

1. Economic and Commercial Geography of India- C.P.Mamoria
2. Economic and Commercial Geography of India – Sharma
3. A comprehensive geography of India- Khullar.

Question Pattern

5 out of 8 questions, 05x15 =75 marks