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<th>Maximum Marks</th>
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Note:- 1. Semesters from I to IV Teaching Hours per Week: Theory- 4 Hours: 4 Credits. 
       Practicals- 3 Hours: 2 Credits.  
       2. Semesters V to VI Teaching Hours per week and per paper: Theory- 3 
       Hours: 3 Credits. Practical- 3 Hours: 2 Credits.
THEORY PAPERS

Paper 101 Geography of India

Maximum Marks: 100
External Assessment: 75
Internal Assessment: 25
Time: 3 Hours

Note: Question 1 is compulsory and comprises of ten short questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.

Unit-I

1. India: Location, relief structure and drainage systems.
2. Climate, soils, natural vegetation.

Unit-II

2. Migration, human settlement types and urbanization.

Unit-III

1. Land resources, irrigation, regional variations in cropping pattern, Green revolution and problems of Indian agriculture.
2. Energy and mineral resources: coal, petroleum, hydroelectricity and nuclear energy, iron ore, manganese and mica.

Unit-IV

1. Industries- iron and steel, cotton textile, sugar and petrochemical industries; and industrial regions of India.

Unit-V

1. Modes of transport and communication, international trade changing pattern of export and import.

Suggested Readings

1. Deshpande, C D: India – A Regional Interpretation, Northern Book Depot, New Delhi, 1992.
Paper 201 Physical Geography – I

Maximum Marks: 100
External Assessment: 75
Internal Assessment: 25
Time: 3 Hours

Note: Question 1 is compulsory and comprises of Ten short questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.

Unit-I

2. Geological time scale and rocks.

Unit-II

1. Earth movements; organic, epeirogenic, earth quakes and volcanoes.
2. Wegner’s theory of continental drift and Plate tectonic theory.

Unit-III

1. Weathering; causes and its types.
2. Mass-movements; causes, its types and impacts.

Unit-IV

1. Concept of cycle of erosion; cycle of erosion by W.M. Davis

Unit-V


References

Paper 301 Physical Geography-II

Maximum Marks: 100
External Assessment: 75
Internal Assessment: 25
Time: 3 Hours

Note: Question 1 is compulsory and comprises of Ten short answer type questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.

Unit-I
1. Weather and Climate; Origin, composition and structure of atmosphere.
2. Insolation, Global heat budget, Horizontal and vertical distribution of temperature, inversion of temperature.

Unit-II
1. Atmospheric pressure- measurement and distribution, pressure belts, planetary winds, Monsoon and Local winds.

Unit-III
1. Humidity- measurement and variables, evaporation, condensation, precipitation forms and types and distribution.

Unit-IV
1. Climate classification by Koppen; Climatic change and global warming.

Unit-V
1. Configuration of oceanic floors, Temperature and Salinity of ocean, Land and water distribution.
2. Tides, waves, ocean currents and oceanic resources.

Suggested Readings:
5. Trewartha, G.T., The Earth’s Problems Climates, University of Wisconsin Press, USA.
Paper 401 Human Geography

Maximum Marks: 100
External Assessment: 75
Internal Assessment: 25
Time: 3 Hours

Note: Question 1 is compulsory and comprises of Ten short answer type questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.

Unit-I

1. Nature scope and Historical development of Human Geography.
2. Division of Mankind: Spatial distribution of race and tribes of India; concept of man-environment relation.

Unit-II


Unit-III

1. Meaning, nature and components of resources; Classification of resources – renewal and non-renewable; biotic and abiotic, recyclable and non recyclable.

Unit-IV

1. Distribution and density of world population, population growth, fertility and mortality patterns.
2. Concept of over, under and optimum population; Population theories: Malthus.

Unit-V

2. Population pressure, resource use and environment degradation; sustainable development, concept of deforestation, soil erosion, air and water pollution.

Suggested Readings:-
Paper 501 Economic Geography

Maximum Marks: 100
External Assessment: 75
Internal Assessment: 25
Time: 3 Hours

Note: Question 1 is compulsory and comprises of Ten short answer type questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.

UNIT-I

2. Classification of economic activities and their impact on environment.

UNIT-II

1. World natural resources: Types, bases and classification.
2. Conservation and utilization of natural resources.

UNIT-III

1. Spatial distribution of food (rice and wheat), commercial (cotton and sugarcane) and plantation crops (tea, rubber and coffee).
2. Ferrous and non-ferrous resources, distribution and production of coal, iron ore, petroleum and natural gas.

UNIT-IV

1. Classification of industries, world distribution and production of iron and steel and textile industry, major industrial complexes of the world.

UNIT-V

1. Transport, communication and trade: geographical factors in their development, major modes of water, land and air transport, recent trends in international trade

Suggested Readings:

Paper-502 Introduction to Remote Sensing

Maximum Marks: 100
External Assessment: 75
Internal Assessment: 25
Time: 3 Hours

Note: Question 1 is compulsory and comprises of Ten short answer type questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.

UNIT-I
1. Introduction to Remote Sensing, Definition, Basis of Remote sensing, Electromagnetic spectrum, stages in remote sensing.

UNIT-II

UNIT-III
1. Types of Imageries and their application in various fields such as agriculture, environment and resource mapping.

UNIT-IV
1. Introduction to Aerial Photographs: their advantages and types.
2. Elements of aerial Photo interpretation.

UNIT-V
1. Applications of Remote sensing techniques in Geographical aspects.

Suggested Readings:
2. Kumar Meenakshi 2001. Remote Sensing, NCERT, New Delhi,
6. Telugu Academy 2011. B.A/B.Sc, Sudura Grahaka Sastram-Bowgolika samachara vyavasta
Note: *Question 1 is compulsory and comprises of Ten short answer type questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.*

**UNIT-I**

1. Introduction to Geographical Information System: Definition, purpose, advantages.
2. History of GIS.

**UNIT-II**

1. Software and hardware requirements.
2. Classification of Software and Hardware.

**UNIT-III**

1. Data capture/Input, Data Storage, Retrieval, analysis and output.
2. GIS data types: Spatial and attribute data-Raster and Vector data structure.

**UNIT-IV**

1. GPS, Definition, GPS satellites and its Applications

**UNIT-V**

1. Remote sensing and GIS integration.
2. Application of GIS in various fields of geography.

**Suggested Readings:**

Paper-602 Quantitative methods

Maximum Marks: 100
External Assessment: 75
Internal Assessment: 25
Time: 3 Hours

Note: Question 1 is compulsory and comprises of Ten short answer type questions to be answered in 15-20 words. There will be eight long questions, two from each section. The candidate has to answer one question from each section. All five questions carry equal marks.

UNIT-I
1. Introduction to quantitative methods.

UNIT-II
1. Measure of Central Tendency: Mean, Median and Mode.

UNIT-III
1. Measure of Dispersion: Range, Quartile deviation and Mean deviation, Standard deviation, Coefficient of variation.

UNIT-IV

UNIT-V
1. Application of quantitative methods in Geographical Aspects.

Suggested Readings:
PRACTICALS

Paper 102 Maps and Scales

Maximum Marks: 100
Time: 3 Hours

Distribution of Marks
Exercises = 80
Record File = 10
Viva-voce = 10

Note: There will be four questions in all and candidate has to attempt three exercises selecting at least from each unit.

1. Introduction to Cartography.
2. Maps and their types.
   (i) Methods of Expressing a scale
   (ii) Conversion of Statement of Scale into R.F. and vice-versa.
   (iii) Plain Scale (Km and mile)
   (iv) Comparative Scale
   (v) Diagonal Scale
   (vi) Measurements of distances and areas of Maps

Suggested Readings:
Paper 202 Representation of Physical Features
Maximum Marks: 100
Time: 3 Hours

Distribution of Marks
Exercises = 80
Record File = 10
Viva-voce = 10

Note: There will be four questions in all and candidate has to attempt three exercises selecting at least from each unit.

1. Introduction to Topographical Sheets
   India and adjacent countries
2. Conventional Signs
3. Methods of representing relief-Spot heights, Bench Marks, Lear coloring and Hill Shading.
4. Representation of Topographical features by contours.
   Slopes (Concave, convex, undulating and terraced)
   Valleys (V Shaped, U shaped, Gorge, Re-entrant)
   Ridges (Conical hill, Volcanic hill, Plateau, Escarpment)
   Complex features (waterfall, sea cliff, overhanging cliff, Fiord coast)
5. Interpretation of Physical Features in SOI maps.

Suggested Readings:

Paper – 302 Representation of Climatic Data

Maximum Marks: 100
Time : 3 Hours

Distribution of Marks
Exercises = 80
Record File = 10
Viva-voce = 10

Note: There will be four questions in all and candidate has to attempt three exercises selecting at least from each unit.
1. Collection of Climatic data.
2. Representation of temperature and rainfall.
   (i) Line and Bar Graph – 1 Exercise.
   (ii) Distribution of temperature (180 therms) – 1 Exercise.
   (iii) Distribution of rainfall (180 hytes) – 1 Exercise.
   (iv) Hythergraph - 1 Exercise.
2. Climograph (wet and dry places) - 2 Exercise.
3. Weather map Interpretation (January & July) - 2 Exercise.

Suggested Readings:
Paper -402 Map Projections

Distribution of Marks
Exercises = 80
Record File = 10
Viva-voce = 10

Note: There will be four questions in all and candidate has to attempt three exercises selecting at least from each unit.

1. Introduction to Map Projection: Characteristics of latitudes and longitudes lines.

1. Cylindrical projections: Characteristics, applications and drawing;
   (i) Simple cylindrical projection
   (ii) Cylindrical equal area projection.

3. Conical Projections: Characteristics, applications and drawing.
   (i) Simple conical projections with one standard parallel
   (ii) Simple conical projection with two standard parallel

   (i) Polar Zenithal Equidistant Projection.

5. Characteristics, applications and drawings of Sinosoidal Projection

Suggested Readings:

Paper 503 Maps and Diagrams

Maximum Marks: 100
Time: 3 Hours

Distribution of Marks
Exercises = 80
Record File = 10
Viva-voce = 10

Note: There will be four questions in all and candidate has to attempt three exercises selecting at least from unit I and II, while unit III is compulsory.

1. Principal of map design and layout
2. Symbolization: point, line and area symbol
3. Lettering and toponomy
4. Mechanics of map construction
5. Distribution maps
   (i) Qualitative distribution maps
       • Choroschematic maps
       • Chorochromatic maps- 2 Exercise
   (ii) Quantitative distribution Maps
       • Isopleth maps-3 Exercises
       • Choropleth maps-3 Exercises
       • Dot maps-3 Exercises
       • Diagrammatic maps- 3 Exercises.

Suggested readings:

Paper 504 Field and Survey Report Socio-economic aspects

Distribution of Marks
Field Report = 75
Viva-voce = 25

I. Survey
1. Conducting Field Survey in local area
2. Framing objectives
3. Collection of Data-Primary/Secondary
4. Selection of Samples and Sampling Techniques.
5. Analysis

II. Report Writing
Introduction, Statement of the Problem, Review of the literature, Methodology, Objectives, Hypothesis, Study area, Interpretation, Summary and Conclusion and Bibliography

Suggested readings:
2. Bajpal S.R. methods of Social Survey and Research.
Paper-603 Remote Sensing

Maximum Marks: 100
Time : 3 Hours

Distribution of Marks
Exercises = 80
Record File = 10
Viva-voce = 10

Note: There will be four questions in all and candidate has to attempt three exercises selecting at least from unit I and II, while unit III is compulsory.

1. Demarcation of Principal Point, Conjugate Principal point and Flight line on Aerial Photographs – 1 Exercise
2. Determination of Scale of Aerial Photographs – 1 Exercise.
3. Interpretation of Single Vertical Photographs – 1 Exercise.
4. Use of Stereoscope and Identification of Features – 1 Exercise.
5. Techniques of Visual interpretation.

Suggested readings:

Distribution of Marks
Field Report = 75
Viva-voce = 25

I. Survey
1. Conducting Field Trips
2. Physical and cultural landscapes
3. Human life and occupation
4. Cropping pattern.
5. Irrigation and water harvesting methods.

II. Report Writing

Suggested readings:

2. Bajpal S.R. methods of Social Survey and Research.