SRI VENKATESWARA UNIVERSITY

B.A/B.SC COURSE IN GEOGRAPHY

SEMESTER-IV

W.E.F.2021-22

Course - IV: Geography of India

Objectives: *to learn 1)* physiographic , *soils, drainage ,climate and natural vegetation 2) Population aspects, urbanization and smart cities 3) Agriculture, green and white revolution, energy and minerals resources 4) Industries and industries regions of India 5)Trade and transport system in India.*

Unit – I

India: Location, Physiographic divisions and drainage System .Climate, Soils, natural vegetation.

Unit – II

Population: Growth, Density, Distribution and Composition. Types of Migration, Urbanization, Concept of Smart city.

Unit – III

Agriculture: Irrigation, Green and white revolution, development and problems of Indian agriculture. Energy and mineral resources: coal, petroleum, hydroelectricity and nuclear energy, iron ore, manganese and mica.

Unit – IV

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

Unit – V

Modes of transport and communication: Rail, Road, Land, Water ways, international trade changing pattern of export and import.

Co-curricular activities : Preparation of Drainage map, conduct seminars on conservation of natural vegetation, preparation of smart city models with tharmocol , identification of iron and steel industrial regions in India.

Learning outcome:

After completion of the Paper, the student will learn about 1) Physiographic, soils, drainage, climate and natural vegetation 2) Population aspects, urbanization and smart cities 3) Agriculture, green and white revolution, energy and minerals resources 4) Industries and industries regions of India 5)Trade and transport system in India.

Suggested Readings:

1. Deshpande, C D: India – A Regional Interpretation, Northern Book Depot, New Delhi, 1992.
2. Singh, Gopal: Geography of India, Atma Ram and Sons, 2006.
3. Shafi, M: Geography of South Asia, McMillian and company, Calcutta, 2000.
4. Singh, R L (ed): India: A Regional Geography, National Geographical Society, India, Varanasi, 1971.
5. Spate, D H K and ATA Learmonth: Indian and Pakistan – Land, People and Economy, Methnen and Company, London, 1967.

SRI VENKATESWARA UNIVERSITY
B.A./ B.Sc **DEGREE COURSE IN GEOGRAPHY**
SEMESTER SYSTEM
(Effective from the Academic Year 2021-2022)
Semester: Geography of India
MODEL QUESTION PAPER

Time: 3 Hrs **Marks: 75**

Part-A

Answer any five of the following questions

Each Question Carries 5 Marks

5 x 5= 25 Marks

1). Indian locational aspects.
2). Natural vegetation-India.
3). Population Density
4). Concept of smart city.
5). Green revolution
6). Coal reserves in India
7).Cotton textile industries in India
8). Indian Water Transportation.

Part-B

Answer ALL the questions with internal choice

Each Questions Carries10 Marks

5x10=50 Marks

9). a. Explain the major physiographic divisions of India.

(Or)

b. Discuss about the drainage system of India.

10). a. Mention about the Population of Growth in India after Independence.

(Or)

b. What is migration? Explain briefly Types of migration in India.

11) a. Explain about the development and problems of agriculture in Indian.

(Or)

b. Examine the Hydroelectricity and nuclear energy in India.

12. a. Explain the Indian sugar industries with respect to production and distribution.

(Or)

b. A brief note on industrial regions of India.

13. a. Give a brief account on road transport in India.

(Or)

b. Discuss the pattern and trends of international trade in India.

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SEMESTER-IV
W.E.F.2021-22

2 Hours/ week

Practical IV: Thematic mapping

30 Hours

Objectives *To learn about the concept***,** Thematic mapping, Diagrams, Topographical maps and interpretation OF (S.O.I)

Unit I Thematic mapping: Introduction and meaning, preparation of base map.

Unit II Thematic Maps: Dot method, Choropleth, Choro-cromatic, Isopleths, Iso-chromatic.

Unit III Diagrams: Simple, Compound, and Pie Diagram,

Unit IV Topographical maps: Introduction, and series, marginal information symbols and Interpretation of (S.O.I).

Learning Outcome

After completion of the Practical, the student will learn about thematic mapping, Diagrams, Topographical maps and interpretation of (S.O.I)

Suggested Readings:

1. Anson, R., and Ormelling F. J., (1994): *International Cartographic Association: Basic Cartographic, Vol.* Pregmen Press.
2. John Bygott: An introduction to map work and practical geography; University Tutorial Press Ltd.London,1974
3. Singh, Gopal., (1998): *Map Work and Practical Geography (4th Edition)*, Vikas Publishing House, Ahmedabad.
4. Gupta, K.K. and Tyagi V.C.,(1992): *Working with Map*, Survey of India, DST, New Delhi.
5. Kraak, M.J., (2010): *Cartography: Visualization of Geospatial Data* (3rd edition), Pearson Education Ltd., London.
6. Misra, R.P.,(2014): *Fundamentals of Cartography (*Second Revised and Enlarged Edition), Concept Publishing, New Delhi.
7. Monkhouse, F. J. and Wilkinson, H. R.,(1973): *Maps and Diagrams*, Methuen, London.
8. Rhind, D. W. and Taylor D. R. F., (eds.) (1989): *Cartography: Past, Present and Future*, Elsevier, International Cartographic Association.
9. Robinson, A. H., (2009): *Elements of Cartography* (6th Edition), John Wiley and Sons, New York.
10. Sarkar, A.,(2015):*Practical geography: A systematic approach*, Orient Black Swan Private Ltd., New Delhi
11. Sharma, J. P., (2010): *PrayogicBhugol(Hindi)*, Rastogi Publishers, Meerut.

B.A/B.SC DEGREE PRACTICAL EXAMINATION

Paper: **Thematic Mapping**

(Effective from 2021-2022)

MODEL QUESTION PAPER

Time: 3Hours Maximum Marks: 50

Answer all the Questions

(All questions carry equal marks)

4x10=40 Marks

1. Explain the characteristic of the Preparation of base map.
2. Prepare a "Dot method" from the following data below.
3. Draw a "Pie Diagram" from the following data.
4. Interpret the physical & cultural Features from the given survey of India Topographical map.
5. Record +Viva-voce. 1x10=10 Marks

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B.A/B.SC COURSE IN GEOGRAPHY
SEMESTER-IV
W.E.F.2021-22

Course-V: Introduction to Remote Sensing & Geographical Information System

Objectives: *To learn about the 1)* Remote Sensing *2) Aerial Photography, Advantages of Remote Sensing* ,Applications of Remote sensing techniques in Geographical aspects.*3)* Geographical Information System, - Software and hardware requirements. *4) GIS data types, GPS* satellites and its applications*, 5) Remote Sensing and GIS integration.*

Unit-I

Remote Sensing (RS): Introduction, Definitions, History and Development; Fundamental Principals of Remote Sensing and stages in Remote Sensing; Electromagnetic Spectrum; Energy interaction with the Atmosphere and Earth surface.

Unit-II

Aerial photographs: Introduction, types and their advantages. Photo interpretation Equipment, Types of Sensors, Development of Remote sensing in India. Applications of Remote sensing techniques in Geographical aspects.

.**Unit-III**

Geographical Information System (GIS): Introduction, Definitions, History and Development of GIS. Advantages of GIS; Software and Hardware requirements.

Unit-IV

GIS data types: Spatial and Non –spatial data-Raster and Vector data structure-Entites: point, line and polygon. Global Positioning System (GPS): Introduction and Definition, GPS Satellites and its applications.

Unit-V

Remote sensing and GIS: Applications in Agriculture, Forestry, and Urban planning.

Co-curricular activities : Preparation of charts on Satellite types, Sensors, orbits ,Preparation of satellite models with tharmocol, preparation of notes, webinars and seminars, geographical field visits to SHAR and ISRO Centers.

Learning Outcomes *After completion of the paper student will learn about 1)* Remote Sensing *2) Aerial Photography, Advantages of Remote Sensing* ,Applications of Remote sensing techniques in Geographical aspects.*3)* Introduction to Geographical Information System, - Software and hardware requirements. *4) GIS data types, GPS* satellites and its applications, *5) Remote Sensing and GIS integration.*

Suggested Readings :

1. Basudeb Bhatta 2011 textbook of Remote sensing and GIS Published In India by Oxford University Press(second edition-2011) New Delhi.
2. Burrough P.A. 1986. Principles of Geographic Information Systems for Land Resources Assessment. Oxford University Press, New York.
3. Fraser Taylor D.R. 1991. Geographic Information System. Pergamon Press, Oxford.
4. John R. Jensen 2009. Remote Sensing of the Environment; An Earth Resource Perspective, Pearson Education, (Indian Edition) New Delhi.
5. Kumar Meenakshi 2001. Remote Sensing, NCERT, New Delhi.
6. Lillesand and R.W.Kiefer, 2005. Remote Sensing and Image Interpretation, John Wiley and Sons.
7. M.Anji Reddy 2009. Text book of remote sensing and Geographical Information Systems, BS Publications, Hyderabad.

8. M.Anji Reddy 2008. Text book of remote sensing and Geographical Information Systems, BS Publications, Hyderabad.
9. Pritvish Nag, and M.Kudrat 1998. Digital Remote Sensing, Concept Publishing Company, New Delhi.
10. Star J. and Estes 1994. Geographical Information Systems: An Introduction. Prentice Hall, Englewood, Cliff, New Jersey.
11. Telugu Academy 2011.B.A./B.Sc., Sudura Grahaka Sastram-Bowgolika Samachara Vyavasta.

SRI VENKATESWARA UNIVERSITY
B.A./ B.Sc DEGREE COURSE IN GEOGRAPHY
SEMESTER SYSTEM
(Effective from the Academic Year 2021-2022)
Paper V: Introduction to Remote Sensing & Geographical Information System

MODEL QUESTION PAPER

Time: 3 Hrs **Marks: 75**

Part-A

Answer any five of the following questions

Each Question Carries 5 Marks

5x5 =25 Marks

1. Remote Sensing.
2. History of Aerial Photographs.
3. Stereoscope.
4. RS Platforms.
5. Remote Sensing satellites.
6. Software and hardware in GIS.
7. Types of sensors.
8. GPS.

Part-B

Answer ALL the questions with internal choice

Each Questions Carries10 Marks

5x10=50 Marks

9. a).Write on the history and Advantages of Remote Sensing.

(or)

b). Describe the Basics of Remote Sensing and stages in Remote Sensing – Explain?

10. a) Examine the Development of Remote Sensing in India.

(or)

b). Write a brief note on Applications of Remote Sensing techniques in Geographical Aspects.

11. a). Discuss about the Development of GIS in India.

(or)

b).Explain the history of GIS Purpose and its Advantages.

12. a). Give a brief note on Spatial and attribute data.

(or)

b). Describe about GPS satellites and its applications.

13. a). How to integrate Remote Sensing data with GIS.

(or)

b). Write an essay on Application of GIS in urban planning.

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W.E.F.2021-22

Practical V: Remote Sensing and GIS

2 Hours/ week
30 Hours

Objectives: *To learn about the 1).* Elements of visual interpretation *2).* Image processing (Digital and manual) Data analysis 3).Stereoscope and Stereoscopic Vision Test.*4)* GIS: Types of Software's and Hardware Requirements 5). Applications of Remote Sensing and GIS, Forest monitoring

Unit I Elements of visual interpretation.

Unit II Image processing; Satellite imageries: Introduction and Marginal information of Satellite Imageries. Image processing (Digital and manual) Data analysis: pre – Processing (Radio metric and Geometric Corrections), Enhancement (Filtering);

Unit III Stereoscope and Stereoscopic Vision Test.

Unit IV GIS: Types of Software's and Hardware Requirements; Geo referencing;. Digitization of point, line and, polygon.

Unit V Applications of Remote Sensing: Land use and land Cover, urban sprawl analysis and forest monitoring.

Learning Outcomes

After completion of the paper student will learn about 1). Elements of visual interpretation *2).* Image processing (Digital and manual) Data analysis 3).Stereoscope and Stereoscopic Vision Test. *4)* GIS: Types of Software's and Hardware Requirements 5). Applications of Remote Sensing and GIS, Forest monitoring

Suggested Readings:

1. Anji Reddy. M: Text book of Remote sensing and Geographical information system, B.S publications, Hyderbadpp, 2008.
2.Basudeb Bhatta 2011 text book of Remote sensing and GIS published in India by Oxford university press(second edition-2011) New Delhi.
3.Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press.
4. Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.

B.A/B.SC DEGREE EXAMINATION

Practical Paper: **REMOTE SENSING & GEOGRAPHICAL INFORMATION SYSTEM**

(Practical Examination)

(Effective from 2021-2022

MODEL QUESTION PAPER

Time:3Hours Maximum Marks:50

Answer all the Questions

(All questions carry equal marks)

4x10=40 Marks

1). Elements of visual interpretation of Satellite imageries.

2). Marginal information of Satellite Imageries.

3). Stereoscope and Stereoscopic Vision Test.

4). GIS Data structure: Raster and Vector data structure.

5). Record +Viva-Voce. 1x10=10 Marks