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**GEOGRAPHY**

**( Major )**

Paper : GGY0600104

**( Geography of Environment and Development )**

*Full Marks : 45*

*Time : 2 hours*

*The figures in the margin indicate full marks  
for the questions.*

**1. Choose the correct answer : 1×5=5**

(a) The concept of neo-determinism is associated with

(i) Griffith Taylor

(ii) Ratzel

(iii) Sauer

(iv) Huntington

(b) Desertification is primarily associated with

(i) polar regions

(ii) arid and semi-arid regions

(iii) equatorial regions

(iv) mountain ecosystems

- (c) The concept of 'carrying capacity' is closely related to
- (i) urban morphology
  - (ii) sustainable development
  - (iii) hazard mapping
  - (iv) soil classification
- (d) The population-consumption-technology nexus is mainly related to
- (i) resource distribution
  - (ii) cultural diffusion
  - (iii) environmental degradation
  - (iv) urban morphology
- (e) Which of the following is an example of anthropogenic hazard?
- (i) Earthquake
  - (ii) Flood
  - (iii) Industrial chemical leakage
  - (iv) Cyclone

2. Answer any *five* questions very briefly :  $2 \times 5 = 10$

- (a) What is biome? Mention its any two types.
- (b) What is adaptation? Give one example from any biome.
- (c) Distinguish between hazard and disaster.

- (d) What is meant by desertification?
- (e) What is meant by biosphere?
- (f) What do you mean by corporate ecological responsibility?
- (g) What is meant by sustainable development?
- (h) What is meant by equity in development?
- (i) Define vulnerability in the context of disaster management.
- (j) What is meant by environmental ethics?

3. Answer any *four* questions in short :  $5 \times 4 = 20$

- (a) Explain the significance of environmental geography as a branch of geography.
- (b) Trace the evolution of man-environment relationship from determinism to neo-determinism.
- (c) Describe the functioning of an ecosystem with reference to trophic levels.
- (d) Analyze the relationship between development and environmental degradation.

- (e) Examine the concept of ecology and equity in the development process.
- (f) Explain the importance of water resources in sustaining fishing livelihoods.
- (g) Explain the population-consumption-technology nexus and its environmental implications.
- (h) Examine the impact of technological advancement on resource consumption patterns.

4. Answer any *one* question : 10

- (a) Discuss the major environmental problems faced by developing countries and critically evaluate the policy responses.
- (b) Discuss the major environmental problems at the global level and evaluate the mitigation strategies.
- (c) Evaluate the role of protected areas and water resource management in promoting sustainable livelihoods.
- (d) Evaluate sustainable development as a strategy for balancing environment and development in the 21st century.

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**2 0 2 6**

**GEOGRAPHY**

**( Major )**

**Paper : GGY0600204**

**( Introduction to Remote Sensing and GIS )**

*Full Marks : 45*

*Time : 2 hours*

*The figures in the margin indicate full marks  
for the questions.*

**1. Answer the following questions very briefly :**

**1×5=5**

- (a)** What is the source of energy for passive remote sensing?
- (b)** What is the range of visible part of electromagnetic spectrum?
- (c)** Write the full form of FCC.
- (d)** What is the smallest unit of a digital image?
- (e)** Name one open source GIS software.

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2. Answer any *five* of the following questions in brief :  $2 \times 5 = 10$

- (a) What is electromagnetic spectrum?
- (b) Name two data products of remote sensing.
- (c) What is aerial photography?
- (d) Name two geo-stationary satellites.
- (e) Write the electromagnetic spectrum according to wavelength.
- (f) What is attribute data?
- (g) Name two data products of remote sensing.
- (h) What is metadata?
- (i) Mention two important uses of GIS.
- (j) What are the two main GIS data models?

3. Answer any *four* of the following questions in short :  $5 \times 4 = 20$

- (a) Differentiate between active and passive remote sensing with suitable diagrams.

( 3 )

- (b) Explain the basic principle of remote sensing with a neat diagram.

- (c) What are the advantages and limitations of remote sensing?

- (d) Differentiate between aerial photographs and satellite imageries.

- (e) Discuss the trend of development of GIS in India.

- (f) What is buffer analysis? Why is buffer technique important in GIS?

- (g) Explain the structure and characteristics of raster data.

- (h) What are spatial and non-spatial data types? Describe how these data types work in GIS.

4. Answer any *one* of the following questions : 10

- (a) What is EMR? Discuss the interaction of EMR with atmosphere and Earth's surface.  $2 + 8 = 10$

- (b) Define GIS. Discuss the components of GIS with a suitable diagram.  $2 + 8 = 10$

(c) Discuss the application of GIS in climate change and disaster management.  $5+5=10$

(d) What is image interpretation? Explain the different elements of visual image interpretation with suitable examples.  $2+8=10$

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**2 0 2 6**

**GEOGRAPHY**

**( Major )**

**Paper : GGY0600304**

**( Urban Geography )**

**Full Marks : 45**

**Time : 2 hours**

*The figures in the margin indicate full marks for the questions.*

1. Answer the following questions objectively :

1×5=5

- (a) In which year was the sector model of urban structure formulated?
- (b) Give one example of a mining town in Assam.
- (c) Who gave the concept of umland?
- (d) When was Smart Cities Mission launched in India?
- (e) According to 2011 census, which State recorded the highest level of urbanization in India?

( 2 )

2. Answer the following questions in brief  
(any five) :  $2 \times 5 = 10$

- (a) Define urban fringe.
- (b) Differentiate between satellite town and new town.
- (c) Mention the basis of G. Taylor's classification of towns.
- (d) What is urban sprawl?
- (e) Mention two objectives of AMRUT programme.
- (f) What are the components of urban population growth?
- (g) Mention two emerging urban issues of Guwahati city.
- (h) Write two causes of rising urban crime in Indian cities.
- (i) Mention two characteristics of urban morphology.
- (j) Why is traffic congestion considered a major urban problem?

( 3 )

3. Answer any *four* questions from the following  
in short :  $5 \times 4 = 20$

- (a) Briefly explain the scope of urban geography.
- (b) Differentiate between the patterns of urbanization in the developed and developing countries.
- (c) Explain the major housing problems in Indian cities.
- (d) Briefly explain the concept of rural-urban dichotomy.
- (e) Explain the concept of city region and highlight its importance in contemporary urban studies.  $2 + 3 = 5$
- (f) Describe the characteristics of a smart city.
- (g) Briefly explain the emerging urban issues in Delhi NCR.
- (h) Explain the origin and growth of towns in global context.

4. Answer any one question from the following : 10

(a) Describe the major approaches and recent trends in urban geography with suitable examples. 6+4=10

(b) Discuss the multiple nuclei theory of Harris and Ullman and evaluate its relevance in the present-day context. 8+2=10

(c) Explain the major national urban development policies and programmes in India.

(d) Critically examine the solid waste management system in urban areas and suggest remedial strategies. 7+3=10

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1 (Sem-6/FYUGP) GGY 64 MJ

2026

GEOGRAPHY

( Major )

Paper : GGY0600404

Full Marks : 45

Time : 2 hours

*The figures in the margin indicate full marks  
for the questions.*

Answer the questions from *any one* Option

OPTION—A

( **Surveying Techniques** )

Paper : GGY0600404A

1. Answer the following questions as directed :

1×5=5

- (a) What is the first principle of surveying?
- (b) In which type of surveying only linear measurements are made?
- (c) Surveying shows the \_\_\_\_\_ positions of the objects on the surface of the earth.

( Fill in the blank )

(d) Which of the following classifications in surveying is based on the instrument used?

- (i) Traverse surveying
- (ii) Cadastral surveying
- (iii) Topographic surveying
- (iv) Plane table surveying

( Choose the correct answer )

(e) Levelling survey is used to find the elevations of given points with respect to given or assumed datum.

( Write true or false )

2. Answer any *five* from the following questions in very brief :  $2 \times 5 = 10$

- (a) What are the two basic types of surveying?
- (b) While taking observations for the height and distances which method of surveying is used and why?
- (c) What is local attraction in compass surveying?
- (d) What is Benchmark (BM) in levelling?
- (e) Define 'contour' and 'contour interval'.

(f) What are the sources of error in surveying?

- (g) Differentiate between plan and map.
- (h) What is meant by representative fraction of scale?
- (i) Why is it necessary to draw a scale on the map at the time of plotting?
- (j) Define the term 'bearing' with an example.

3. Write short notes on any *four* from the following :  $5 \times 4 = 20$

- (a) The field of surveying
- (b) Types of field survey instruments
- (c) Principles of plane surveying
- (d) Techniques of using surveying tools
- (e) Difference between radiation and intersection methods of plane table survey
- (f) Whole circle bearing (WCB) and reduced bearing
- (g) Difference between geodetic and plane survey
- (h) Types of ground surveying

4. Answer any one from the following questions : 10

- (a) Define surveying. Describe the significance of field surveying in geographical studies.
- (b) What is the basic concept of GPS? Describe its principles and applications.
- (c) Describe the methods of carrying out surveys for the preparation of maps and plans for different spatial contexts.
- (d) Describe the importance of the use of modern survey tools to enhance knowledge and skill for field-based geographic study.

OPTION—B

( Geography of North-East India )

Paper : GGY0600404B

1. Choose the correct answer from the following : 1×5=5

- (a) Which of the following countries does not share a border with North-East India?
  - (i) Bhutan
  - (ii) Nepal
  - (iii) Chaina
  - (iv) Bangladesh

(b) Which of the following States has the highest percentage of forest in North-East India area?

- (i) Assam
- (ii) Arunachal Pradesh
- (iii) Mizoram
- (iv) Nagaland

(c) Which of the following is most populous State?

- (i) Assam
- (ii) Nagaland
- (iii) Tripura
- (iv) Manipur

(d) Which city is known as the health city of Assam?

- (i) Jorhat
- (ii) Tezpur
- (iii) Sivasagar
- (iv) Guwahati

(e) Which is the longest river in North-East India?

- (i) Barak River
- (ii) Narmada River
- (iii) Subansiri River
- (iv) Brahmaputra River

2. Answer any *five* from the following questions in very short :  $2 \times 5 = 10$

- (a) Write any two factors responsible for low sex ratio in the urban areas of North-East India.
- (b) State two major locational significance of Assam.
- (c) Mention two factors influencing variable climatic character in North-East India.
- (d) State two characteristics that justify North-East India as the land of Unity in Diversity.
- (e) Name the lowest and highest population density States of North-East India.

(f) Write any two characteristics of agriculture of North-East India.

(g) Name two North bank river of the Brahmaputra river system in Assam.

(h) Write any two factors responsible for the industrial backwardness in North-East India.

(i) State two major causes of floods in Assam.

(j) Write the name of any two States where Jhum or shifting cultivation is practice.

3. Answer any *four* from the following questions in short :  $5 \times 4 = 20$

- (a) Highlight the physiographic characteristics of North-East India.
- (b) Explain the mechanisms of the Monsoon climate in North-East India.
- (c) Give a reasoned account of railway networks in North-East India.
- (d) Write a short note on rapid urban growth in North-East India.
- (e) Assam is known as 'Mother Land of Rivers'. Justify the statement.

- (f) What are the various types of soil available in North-East India?
  - (g) Write a note on natural hazards of North-East India.
  - (h) Discuss the need of conservation of wildlife in North-East in India.
4. Answer any one from the following questions :

10

- (a) Write a note on agricultural characteristics of Assam and compare it with the hill region of North-East India.
- (b) Which State is the largest producer of rice in North-East Indian and what factors support its production?
- (c) Highlight the nature of socio-economic development and associated issues in North-East India.
- (d) Critically assess the role of education and transport in North-East India's socio-economic development.

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