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3 (Sem-4/CBCS) GGY HC 1

2022

GEOGRAPHY

(Honours)

Paper : GGY-HC-4016

**(Environmental Geography
and Disaster Management)**

Full Marks : 60

Time : Three hours

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

1. Answer the following questions : **(any seven)**
1×7=7

- (a) Who first defined Environmental Geography ?
- (b) What is bio-diversity ?
- (c) What is ecological succession ?
- (d) What is biome ?
- (e) Name *two* causes of habitat crises ?

Contd.

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- (f) World Water Day is celebrated on ____.
- (g) In which year first Earth summit was held ?
- (h) Excessive irrigation of soil leads to — soil erosion/water-logging.
- (i) Who coined the term ecosystem ?
- (j) Define trophic levels.

2. Answer the following questions : **(any four)**
2×4=8

- (a) Give a definition of Environmental Geography.
- (b) Mention *two* basic objectives of the national policy on disaster management.
- (c) How is acid rain harmful ?
- (d) What is the positive effect of greenhouse gases ?
- (e) What are man-made disasters ?
- (f) What are the benefits of CNG ?
- (g) How is vulnerability related to hazard ?
- (h) What are the *two* types of disaster management ?

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3. Answer the following questions : **(any three)**
5×3=15

- (a) Write the causes of environmental degradation.
- (b) What do you mean by human environment ? Explain *two* types of human environment interaction in brief.
- (c) What are the major approaches to the study of man-environment relationship ?
- (d) What is wildfire ? How does wildfire affect the environment ?
- (e) Explain how deforestation affects the life of people.
- (f) Discuss the salient features of the Disaster Management Act, 2005.
- (g) Discuss the aims and objectives of disaster management.
- (h) Describe the mitigation strategies of flood problem in Assam.

4. Answer the following questions : **(any three)**
10×3=30

- (a) What do you mean by Environmental Geography ? Discuss the scope of environmental geography with reference to its fundamental concepts.

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- (b) "Global warming is burning the earth of today and future of tomorrow." Discuss with suitable illustrations.
- (c) Elaborate the historical progression of man-environment relationship from geographical perspective.
- (d) Critically analyse *five* biggest environmental problems in the world.
- (e) What is disaster ? Discuss the strengths and weaknesses of the Disaster Management Act, 2005.
- (f) Discuss various human responses to different biomes of the world.
- (g) What is the Environmental Protection Act, 1986 ? Critically analyse the significance of the Environmental Protection Act.
- (h) "Population explosion is the root cause of pollution." Explain the statement.

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3 (Sem - 4 / CBCS) GGY HC 2

2022

GEOGRAPHY

(Honours)

Paper : GGY-HC-4026

(Population and Settlement Geography)

Full Marks : 60

Time : Three hours

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

1. Answer **any seven** questions : $1 \times 7 = 7$

- (a) NPR stands for _____.
(Fill in the blank)
- (b) Crude birth rate is expressed in terms of number of births in a year per thousand of the mid year population.
(Write True or False)
- (c) Fecundity indicates mortality rate/ fertility potential/non-working status of the females. (Choose the correct one)

Contd.

(d) The largest city in a country or region is called _____. (Fill in the blank)

(e) "Push and Pull" theory is related with

(i) migration

(ii) economic development

(iii) social change

(iv) All of the above

(Choose the correct answer)

(f) The land between urban and rural areas where daily goods are transported is called _____. (Fill in the blank)

(g) Name a planned city of India.

(h) Up to, what are latitude polar regions populated ?

(i) In which stage of demographic transition India is currently passing ?

(j) Where are cluster settlements generally found ?

2. Answer **any four** questions : $2 \times 4 = 8$

(a) What is dependancy ratio ?

(b) What do you mean by urban fringe area ?

(c) What is threshold population ?

(d) What is population projection ?

(e) What is transhumance ?

(f) Define CBD.

(g) Define the term 'conurbation'.

(h) What do you mean by distribution and density of population ?

3. Answer **any three** questions : $5 \times 3 = 15$

(a) Describe the nature and scope of population geography.

(b) What are the basic sources of population data ?

(c) What are the basic components of population growth ?

(d) What are the major characteristics of rural and urban settlements ?

(e) What do you mean by optimum population ?

(f) Distinguish between primate city and urban fringe.

(g) What are the major premises of Christaller's central place theory ?

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(h) Describe the structural characteristics of a town.

4. Answer **any three** questions : $10 \times 3 = 30$

(a) Define the field of population geography. Describe the relation of population geography with demography.

(b) Describe the characteristics and methodology problems of population data.

(c) Describe the pattern of world distribution of population.

(d) Describe in detail about the population density regions of India.

(e) Describe the pattern of spatial variation in population growth in the world.

(f) Describe the demographic transition theory with necessary illustrations.

(g) Define settlement geography. Describe its nature and scope.

(h) Describe the factors influencing distribution pattern of settlements.

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3 (Sem-4/CBCS) GGY HC 3

2022

GEOGRAPHY

(Honours)

Paper : GGY-HC-4036

(Remote Sensing, GIS and GPS)

Full Marks : 60

Time : Three hours

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

1. Answer **any seven** from the following questions : 1×7=7
- (a) What are sensors ?
 - (b) Write full form of DEM.
 - (c) What is EMR ?
 - (d) What is the visible range of electromagnetic spectrum ?
 - (e) What type of satellite is used in GPS ?

Contd.

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- (f) What is the full form of PSLV ?
- (g) Define topology.
- (h) Give an example of sensor.
- (i) What is Cartosat ?
- (j) What is geocoding ?

2. Answer **any four** questions from the following very briefly : 2×4=8

- (a) What is refraction ?
- (b) What is atmospheric window ?
- (c) What is nadir ?
- (d) What do you mean by path and row ?
- (e) What are the components of GIS ?
- (f) What do you mean by spatial data and attribute data ? Give examples.
- (g) Mention the basic spatial entities in GIS.
- (h) Distinguish between census data and survey data.

3. Answer questions

- (a) E li
- (b) D o
- (c) D r
- (d) D a
- (e) V w
- (f)
- (g)
- (h)

4. Answer questions

- (a)

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3. Answer **any three** from the following questions : $5 \times 3 = 15$

- (a) Explain in brief the advantages and limitations of remote sensing.
- (b) Discuss about the important sources of data in GIS.
- (c) Discuss the utilities of GPS in map making process.
- (d) Distinguish between aerial photograph and satellite imagery.
- (e) What are the different types of camera used in aerial photography ?
- (f) Discuss the elements of image interpretation in remote sensing.
- (g) Explain the importance of map projection in GIS operations.
- (h) Explain briefly how features are measured in GIS.

4. Answer **any three** from the following questions : $10 \times 3 = 30$

- (a) Discuss in detail the development of remote sensing with special reference to India.

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- (b) Discuss the application of remote sensing in flood damage estimation.
- (c) Describe the geometry of vertical aerial photography with suitable diagrams.
- (d) Describe the application of GPS in surveying and mapping.
- (e) Explain the difference between database and database management system in GIS.
- (f) What are the different types of GPS ?
Discuss its principles. 3+7=10
- (g) Discuss the application of remote sensing in urban land management.
- (h) Explain how databases are linked with GIS.
- (i) Discuss in detail analog (visual) image processing and digital image processing for analysing remote sensing data.

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3 (Sem-4/CBCS) GGY HC 1

2023

GEOGRAPHY

(Honours Core)

Paper : GGY-HC-4016

**(Environmental Geography
and Disaster Management)**

Full Marks : 60

Time : Three hours

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

1. Answer the following questions : $1 \times 7 = 7$
- (a) Name the largest ecosystem of the earth.
 - (b) What is the main cause of greenhouse effect?
 - (c) Global warming is expected to result in _____ sea level. (Fill in the blank)

Contd.

- (d) Name the area on the earth's surface which has maximum biodiversity. *02/2018*
- (e) In which year National Environmental Policy was adopted?
- (f) Name the area in India which has maximum biodiversity.
- (g) When was National Disaster Authority formed?
2. Answer the following questions : $2 \times 4 = 8$
- (a) What do you mean by hazard?
- (b) Write *two* common problems in disaster management.
- (c) What are the *two* major classifications of disaster?
- (d) Write *two* major environmental problems being faced by developing countries.
3. Answer the following questions : **(any three)**
 $5 \times 3 = 15$
- (a) Write the adverse effects of depletion of trees.

- (b) What do you mean by floods? Write *three* causes of floods. $2+3=5$
- (c) What is land degradation? Write *any two* major causes of land degradation. $2+3=5$
- (d) What are different types of ecosystem? Explain *any one* of them with examples. $2+3=5$
- (e) Differentiate between solid waste and liquid waste.

4. Answer the following questions : **(any three)**
 $10 \times 3 = 30$
- (a) What are the important characteristics of hotspot and biodiversity? Explain with example. $4+6=10$
- (b) Write the nature and scope of environmental geography. $5+5=10$
- (c) What are the major global environmental problems? Explain *any one* of them in detail. $3+7=10$
- (d) What do you mean by biome? Write the major biomes of the world. $2+8=10$

(e) Differentiate between disaster and hazard and write their major consequences. $2+8=10$

(f) Write a note on national environmental policies and their activities on disaster management. $6+4=10$

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3 (Sem-4/CBCS) GGY HC 2

2023

GEOGRAPHY

(Honours Core)

Paper : GGY-HC-4026

(Population and Settlement Geography)

Full Marks : 60

Time : Three hours

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

1. Answer the following questions : $1 \times 7 = 7$

(a) First stage of demographic transition model is associated with

(i) low birth rate and low death rate

(ii) high birth rate and high death rate

(iii) declining birth rate and low death rate

(iv) high birth rate and low death rate

(Choose the correct option)

Contd.

- (b) On which principle is the $k=4$ hierarchy based in Christaller's central place theory?
- (c) The estimated present population of the world is
- (i) 8.0 billion
 - (ii) 7.2 billion
 - (iii) 6.5 billion
 - (iv) 5.5 billion
- (Choose the correct option)*
- (d) Which year is considered as the demographic divide or year of a great divide in the history of development of population geography?
- (e) Which of the following is the Urban-Rural population ratio according to the census 2011?
- (i) 26 : 42
 - (ii) 38 : 66
 - (iii) 31 : 69
 - (iv) 35 : 62
- (Choose the correct option)*
- (f) The ratio between total population and cultivated area is known as _____ density. *(Fill in the blank)*
- (g) Burgess theory of internal structure states that the concentric circles are based on the amount that people will pay for the land.
- (Write True or False)*

2. Answer the following questions in brief : $2 \times 4 = 8$
- (a) What do you mean by 'hierarchy of settlements'?
 - (b) Define primate city with an example.
 - (c) What do you mean by 'Error of Omission' during a population survey?
 - (d) What do you mean by 'Threshold and Range' in the study of human geography?
3. Answer **any three** questions of the following : $5 \times 3 = 15$
- (a) What is population growth? What are the causes behind positive and negative growth rates of population? $2+3=5$
 - (b) Mention the main assumptions/propositions of Malthusian theory of population growth. Cite *two* criticisms of his theory. $3+2=5$
 - (c) Define urban fringe. Distinguish between Compact settlements and Dispersed settlements.
 - (d) Distinguish between Fertility and Fecundity. Mention the sources of data for fertility analysis. $2+3=5$

(e) Mention the zones of the Burgess Urban Land Use model.

4. Answer **any three** questions : $10 \times 3 = 30$

(a) Describe *any five* patterns of rural settlements in the world on the basis of forms and shapes.

(b) What do you understand by sex ratio? Examine the implications of declining sex ratio in the context of India.

$2+8=10$

(c) Define migration. Discuss how both push and pull factors contribute to migration in the world.

$2+8=10$

(d) Why is the age structure considered an important indicator of population composition? Give reasons.

(e) Define town. Discuss the morphological characteristics of rural and urban settlements.

$2+8=10$

(f) Discuss the principles of Central Place theory with diagrams. Mention the merits and demerits of the theory.

$8+2=10$

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3 (Sem-4/CBCS) GGY HC 3

2023

GEOGRAPHY

(Honours Core)

Paper : GGY-HC-4036

(Remote Sensing, GIS and GPS)

Full Marks : 60

Time : Three hours

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

1. Answer the following questions : $1 \times 7 = 7$
- (a) What is meant by resolution of a sensor?
 - (b) Give the full form of ISRO.
 - (c) What is pixel?
 - (d) Name the radiation with longest wavelength in electromagnetic spectrum.

Contd.

(e) Name *one* Indian remote sensing satellite.

(f) How many satellites are used in GPS ?

(g) Give an example of remote sensing platform.

2. Answer the following questions : $2 \times 4 = 8$

(a) What is georeferencing ?

(b) What is photogrammetry ?

(c) Give a reasonable definition of GIS.

(d) What is Landsat ? Give *one* example.

3. Answer **any three** questions from the following : $5 \times 3 = 15$

(a) Explain the principle of aerial remote sensing.

(b) What is buffer ? Why is buffer important for data interpretation in GIS ?

(c) Analyse the technique of data layer extraction.

(d) Distinguish between supervised and unsupervised data classification techniques.

(e) Explain the structure and characteristics of vector data.

4. Answer **any three** questions from the following : $10 \times 3 = 30$

(a) Discuss the development trend of satellite remote sensing in India.

(b) Explain with examples the procedure and technique used in overlay analysis.

(c) Present the history of development of GIS with examples.

(d) Describe the characteristics of spatial and non-spatial data types and state how these are dealt with in Database Management System. $6 + 4 = 10$

(e) State how land resources are analysed using remote sensing.

(f) Explain the procedure and technique of GPS survey with examples.