

Total number of printed pages-11

63/2 (SEM-4) GGY 403 (OPT1/OPT2)

2024

GEOGRAPHY

Full Marks : 80

Pass Marks : 32

Time : Three hours

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

Paper : GGY 403 (OPT1)

(*Fluvial Geomorphology*)

I. Answer the following questions : $1 \times 6 = 6$

(a) Which among the following statement(s) is/are correct about alluvial fans ?

A. They are triangular-shaped deposits of water-transported material.

B. The deposits are usually poorly sorted.

Contd.

C. They are unconsolidated sedimentary deposits and tend to be larger and more prominent in arid to semi-arid regions.

Choose the most appropriate options given below :

- (i) Only A
 - (ii) Only A and B
 - (iii) Only A and C
 - (iv) A, B and C
- (b) What is the section of a river that diverts from the main channel of the watercourse and rejoins the main stem downstream called ?
- (i) Braided channel
 - (ii) Anabranh
 - (iii) Ait
 - (iv) Delta
- (c) The bottle screw-like flow of water in a meander is known as
- (i) hydraulic curves
 - (ii) helicodal flow
 - (iii) laminar flow
 - (iv) hjulstrom curves

(d) River erosion is responsible for the formation of

- (i) sink-holes
- (ii) kames
- (iii) pot-holes
- (iv) swallow-holes

(e) The term 'panplane' refers to

- (i) a level surface formed by erosion
- (ii) a plain formed by joining of floodplains
- (iii) a level plain formed by human intervention
- (iv) a level surface formed by the fluvial cycle at the old stage

(f) The flowing of liquid and air through something is known as

- (i) ran-off
- (ii) infiltration capacity
- (iii) overland flow
- (iv) through flow

II. Give brief answer to the following questions
 $2 \times 5 = 10$

- (a) What do you understand by channel equilibrium?
- (b) What do you mean by overland flow?
- (c) Define stream velocity.
- (d) What is point bar?
- (e) Define the term 'fluvial hazards'.

III. Answer **any six** of the following questions:
 $5 \times 6 = 30$

- (a) Briefly elaborate the factors that influence bank erosion.
- (b) With the aid of examples, explain how human activities can increase the risk of flooding.
- (c) Explain the relation between fluvial geomorphology and hydrology.
- (d) Write a detailed note on controlling factors of the graded stream.

- (e) What are the factors responsible for floodplain? Mention *any two* associated landforms of it.
- (f) Write in brief about the application of remote sensing and GIS in geomorphology.
- (g) Distinguish between steady flow and unsteady flow.
- (h) Write a short note on river basin planning and development.
- (i) Write briefly about factors controlling channel morphology.

IV. Answer **any two** from the following:
 $10 \times 2 = 20$

- (a) Elaborate on the fluvial geomorphology of the Brahmaputra river.
- (b) Write a detailed note on drainage basin as a fluvial system.
- (c) Examine and assess the diverse channel patterns evident in fluvial systems, emphasizing their geomorphic importance and the variables shaping their development.

V. Answer **any one** question from the following :
14

- (a) Explore the concept of channel equilibrium in fluvial geomorphology, elucidating the factors influencing channel stability and adjustment over time.
- (b) What are various types of erosion? Explain the influencing factors that impact a river catchment.
-

Paper : GGY 403 (OPT2)

(Population, Resource and Development)

1. Multiple-choice questions : (Answer **all**)

1×6=6

- (i) Marx's theory of population suggests that
- (a) population growth is a natural consequence of industrialization
 - (b) capitalism leads to population decline
 - (c) economic systems drive population dynamics
 - (d) population size is irrelevant to economic development
- (ii) Vulnerability in the context of population studies refers to
- (a) the susceptibility of population to natural disasters
 - (b) the inability of a population to adapt to changing circumstances
 - (c) the lack of resources available to a population
 - (d) the genetic predisposition of a population to diseases

(iii) What is the primary objective of a population policy?

- (a) To control immigration
- (b) To manage the growth and distribution of the population and resources
- (c) To promote family planning
- (d) To achieve a balance between the population size and the available resources, ensuring sustainable development and improved quality of life for all citizens

(iv) What is the primary purpose of defining the currently active population?

- (a) To estimate the size of the labour force
- (b) To analyze unemployment rates
- (c) To assess workforce participation
- (d) To analyze employment rate

(v) Which of the following principles is central to the Gandhian approach to environmental conservation?

- (a) Industrialization
- (b) Sustainable development
- (c) Consumerism
- (d) Urbanization

(vi) What does the qualitative aspect of human resources primarily focus on?

- (a) Employee turnover rates
- (b) Employee productivity
- (c) Employee skill, knowledge, and capabilities
- (d) Employee salary and benefits

2. Answer in brief: (answer **all**) 2×5=10

- (i) State the distinction between Malthus view and socialist view on population.
- (ii) Population as a source of power and wealth in the light of Mercantilist view. Illustrate the statement.
- (iii) Write the concept of feedback loops in the light of limit to growth theory.
- (iv) What do you mean by underemployment?
- (v) How does increasing global population impact greenhouse gas emissions?

3. Answer in brief: **(any six)** 5×6=30

- (i) Explain how the development has an impact on the demographic transition?
- (ii) Write a note on contemporary relevance of Malthus theory.
- (iii) Elaborate how law of diminishing return is related with population growth.
- (iv) Explain how unrestricted access to shared resources can lead to their depletion.
- (v) Discuss the role of incentives, regulations, and family planning services in the implementation of such policies.
- (vi) Describe the factors that influence the size of labour force.
- (vii) Elaborate the aspects of population which are considered to characterize the qualitative aspect of human resources.
- (viii) Write a short note on link among population growth, housing and sanitation.
- (ix) Explain in detail the reason behind structural unemployment.

4. Answer in detail: **(any two)** 10×2=20

- (i) Illustrate the policies and programmes designed for special demographic groups such as women, children, youth, and the elderly so far in India.
- (ii) "Without environment promoting sustainable development is impossible." Elaborate the statement.
- (iii) Elaborate with examples from different countries of the world on population policies.

5. Answer in detail: **(any one)** 14

- (i) Critically examine the policy of National Health Mission 2013 in India.
 - (ii) Analyze the arguments made by scholars of development and developing countries regarding relation between population change and problems of food across the globe.
-