

Total number of printed pages-4

3 (Sem-6/CBCS) GGY HE 2

2024

GEOGRAPHY

(Honours Elective)

Paper : GGY-HE-6026

(Hydrology)

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 most predominant form of precipitation.
- (b) What is pluviometer ?
- (c) What is hyetograph ?
- (d) What do you mean by wetted perimeter ?

Contd.

(e) A plot between rainfall intensity versus time is called as

(i) hydrograph

(ii) mass curve

(iii) hyetograph

(iv) isohyet

(Choose the correct option)

(f) Evapotranspiration is confined to

(i) daylight hours

(ii) night-time only

(iii) land surface only

(iv) None of the above

(Choose the correct option)

(g) The intensity of rainfall is expressed as

(i) cm/sec

(ii) cm/hour

(iii) m/sec

(iv) m/hour

(Choose the correct option)

2. Answer the following questions very briefly :

2×4=8

(a) Distinguish between throughfall and throughflow.

(b) Distinguish between competence and capacity of a river.

(c) Define baseflow.

(d) What is surface runoff ?

3. Answer **any three** of the following questions in short :

5×3=15

(a) Discuss briefly the sources of fresh water.

(b) What are the different modes of transportation of a river ? Explain briefly.

2+3=5

(c) Explain briefly the causes responsible for variations in the river flow.

(d) Briefly explain the meaning of runoff discharge and mention the associated factors.

3+2=5

(e) What do you mean by a braided river ? What are the chief characteristic causes of braiding ?

4. Discuss in detail the importance of hydrology in physical geography. 10

Or

Discuss in detail the spatio-temporal patterns of rainfall distribution in India.

5. Explain the important geometrical parameters of a river basin. 10

Or

What is a flow duration curve ? What information can be obtained from the study of flow duration curve of a stream at a site ?

4+6=10

6. Discuss in detail the influence of rock, soil and vegetation on runoff with necessary illustrations. 10

Or

“Human activities modify the river basin hydrology.” Justify the statement with local examples.