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MGGE-004

M.SC. GEOGRAPHY

(MSCGG)

Term-End Examination

December, 2025

**MGGE-004 : HYDROLOGY AND WATER
RESOURCES**

Time : 3 Hours

Maximum Marks : 100

***Note :** Attempt all questions. Marks are indicated against each question.*

Section-A

1. Answer any *five* questions. Your answer should be in about **200** words each. $5 \times 5 = 25$
 - (i) Explain the role of evaporation and transpiration in hydrological cycle in brief.
 - (ii) What is drought ? State any *six* effects of drought.

- (iii) What are coastal floods ? Discuss different cause of coastal flooding in brief.
- (iv) Describe in brief any *five* structural measures of flood control.
- (v) Discuss the 'Concept of water stress'.
- (vi) Write a short note on Water Harvesting.
- (vii) Discuss the National Water Policy of India, 2012 in brief.

Section-B

2. Answer any *three* questions. Your answer should be in about **400** words each. $3 \times 10 = 30$
- (i) Explain hydrography and its elements with a diagram.
 - (ii) Describe the vertical and horizontal movement of groundwater in detail.
 - (iii) Discuss any *five* inter-state water disputes of India.
 - (iv) Discuss water distribution and its importance in cryosphere and marine water in detail.
 - (v) Write a detailed note on 'National Mission for Clean Ganga'.

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Section-C

Note : Answer any *three* questions. Each question carries equal marks. Your answer should be in about **600** words each. 3×15=45

3. Elaborate the development of hydrology from ancient to recent times in detail. 15
4. Explain the linear, aerial and relief aspects of the basin morphometry in detail. 15
5. Discuss in detail the availability and consumption patterns of water in different sectors in the world. 15
6. Describe water quality. Explain the *four* categories of water pollutants in detail. 15
7. Briefly discuss direct runoff. Explain any *three* methods for direct measurement of runoff. 15

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