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MGGE-004

M. SC. GEOGRAPHY

(MSCGG)

Term-End Examination

June, 2026

**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 **200** words each. 5×5=25
 - (i) Briefly discuss the human impact on hydrological cycle.
 - (ii) Define water balance. Mention any *three* general characteristics of water balance method.

- (iii) What is aquifer ? Briefly discuss its *two* types.
- (iv) Discuss meteorological drought in brief.
- (v) Describe water demand and consumption pattern in urban India.
- (vi) Explain in brief different indicators of good water governance policy.
- (vii) Write a short note on water salinity.

Section—B

2. Answer any *three* questions. Your answer should be in about **400** words each. $3 \times 10 = 30$
- (i) Discuss the relationship among hydrology, meteorology and climatology in detail.
 - (ii) Describe fluvial floods. Explain the four natural and human induced factors causing fluvial flooding in detail.
 - (iii) Explain the concept of valuing water. Describe any *three* use values of water in brief.
 - (iv) Write a note on 'National Mission for Clean Ganga.'

- (v) Discuss the water pricing practices in the World and India.

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. What are different principles on water and sustainable development ? Explain 'SDG-14 : Life Below Water' with its targets in detail. 15
4. Describe water pollution. Explain water quality criteria for different uses of water in detail. 15
5. Explain the concept of 'Unit Hydrograph.' Describe the limitations and applications of Unit Hydrograph. 15
6. Explain any *five* river basin factors affecting the runoff with diagram. 15
7. Describe catchment area. Discuss different patterns of the drainage network with sketches. 15

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