

Roll No.

Total Pages : 2

CMDQ/M-24

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HYDROLOGY AND OCEANOGRAPHY

Paper–M–GEO–402

Time Allowed : 3 Hours]

[Maximum Marks : 70

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Write short notes (not more than 50 words for each) on the following : 7×2=14
 - (a) Bio hydrology.
 - (b) Short circuiting of Cycle.
 - (c) Double mass curve.
 - (d) Falling limb.
 - (e) Guyots.
 - (f) Terrestrial deposits.
 - (g) Benguela current.

UNIT-I

2. Discuss how Climatological elements modify the Hydrological processes. 14

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3. How does Hydrological cycle work? Discuss various anthropogenic interventions in Hydrological cycle. 14

UNIT-II

4. While measuring Rainfall at a rain gauge station many problems and uncertainties are encountered. Discuss. 14
5. Describe different methods of Separating the base flow from the total runoff with suitable sketches. 14

UNIT-III

6. Define the Ocean basin. How the Mid-Indian Oceanic Ridge divides the Indian Ocean into different sub-basins? Give their characteristics. Also, draw suitable sketches. 14
7. Red clay deposited on the floor of oceans is of Volcanic origin. Explain with suitable examples and sketches. 14

UNIT-IV

8. How does the presence of the Antarctic Circumpolar current affect the pole-to-equator thermal gradient? Explain with examples and sketches. 14
9. Give an account for variations in Oceanic Salinity and discuss its multidimensional effects. 14

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