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**PG CBCS**  
**M.A. & M.Sc. Semester-I Examination, 2021**  
**GEOGRAPHY**  
**PAPER: GEO 102**  
**(HYDROSPHERIC SCIENCES)**

**Full Marks: 40****Time: 2 Hours**

The figures in the right-hand margin indicate full marks.  
 Candidates are required to give their answers in their own words as practicable.  
 Illustrate the answers wherever necessary.

**Write the answer for each unit in separate sheet**

**GROUP/UNIT**

(GEO 102.1: OCEANOGRAPHY)

**Answer any TWO questions from the following:**

**2 X 10=20**

1. Explain the characteristics of major subdivisions of marine environment.
2. Illustrate the relationship between temperature, salinity and density of sea water.
3. Classify marine sediments and identify their sources.
4. Critically discuss the human impacts on the coast with special reference to Digha and Odisha coastal tract.
5. Examine the role of UNCLOS – III in exploration of marine resources.

**GROUP/UNIT**

(GEO 102.2: HYDROLOGY)

**Answer any TWO questions from the following:**

**2 X 10=20**

1. Elucidate hydrological system in a basin scale. Examine the application of Gumbel's equation for frequency analysis of hydrological events. 6 + 4
2. Mention the steps for constructing area-depth curve. Explain the techniques of estimating rainfall volumes by isohyetal method. 6 + 4
3. Describe the procedure for estimating infiltration with constant head method. Bring out the factors controlling evapotranspiration. 6
4. Illustrate the technique of estimating stream discharge using area velocity method. Identify the factors of ground water recharge. 6 + 4
5. Discuss with example the steps involved in constructing unit hydrograph and assess its application to analyse basin hydrology. 6 + 4