*Total page: 2*



**PG (NEW) CBCS**

**M.Sc. Semester-I Examination, 2018**

**GEOGRAPHY**

PAPER: GEO-102

(Hydrospheric Science)

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

---

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

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

GEO 102.1: Oceanography

**Marks: 20**

**GROUP-A**

**1. Answer any one question:** **1×8=8**

**a)** Identify the major sources of sediment in the sea and mention their characteristics. **8**

**b)** Discuss the role of vegetation's and moistures in the evolution of coastal sand dunes with special reference to sandy alluvium coast of Odisha and West Bengal. **8**

**Group-B**

**2. Answer any two questions:** **2×4=8**

**a)** Identify the various biotic resources of the oceans. **4**

**b)** Briefly explain the origin of the tides with special reference to progressive wave theory. **4**

**c)** Elucidate glacial control theory for the development of coral reef. **4**

**d)** Elucidate the significance of mangrove swamps as coastal habitat. **4**

**Group-C**

**3. Answer any two questions:** **2×2=4**

**a)** Briefly explain the geomorphology of coastal dunes. **2**

**b)** What are the biological functions of saltmarshes? **2**

**c)** What is the origin of cobalt rich oceanic crust? **2**

**d)** Define EEZ. **2**

*(Turn Over)*

GEO 102.2: Hydrology

**Marks: 20**

## GROUP-A

**1. Answer any one question:** **1×8=8**

**a)** Elucidate isohyetal method of estimating rainfall volume. What is the necessity of magnitude frequency analysis of hydrological events? **5+3=8**

**b)** How is system approach applied in explaining river basin hydrology? **8**

## Group-B

**2. Answer any two questions:** **2×4=8**

**a)** Why 'Thiessen polygon' method is more useful for precise measurement of spatial distribution of precipitation volume. **4**

**b)** Bring out the hydrological significance of basin lag-time. **4**

**c)** How is discharge of a river estimated from a rating curve? **4**

**d)** Discuss the role of soil moisture for maintaining regional hydrological hazard's. **4**

## Group-C

**3. Answer any two questions:** **2×2=4**

**a)** What is 'Confined Aquifer' **2**

**b)** Define return flow in a hydrological cycle. **2**

**c)** Define unit-hydrograph. **2**

**d)** Define aquitard. **2**

*****