

**Bajkul Milani Mahavidyalaya
(Vidyasagar University)**

Department of Geography (UG & PG)

M. A. / M. Sc., 1st Semester

End Term Practical Examination -2020-'21

Subject: Geography

Paper: GEO 195: Hydrological Techniques and Sedimentological Analysis

Full Marks: 50

Time: 4-Hours

(Candidates are required to give their answers in their own words as far as practicable)

Unit: GEO 195.1: Hydrological Techniques

Group-'A'

Answer any two questions:

10 x 2=20

1. Mention the steps for estimating infiltration in field by double ring infiltrometer. 10
2. Explain ScS curve number method for estimating runoff. 10
3. What are the basic difference between Thiessen network and Isohyetalmethods to determine rainfall volumes? 10
4. What are the steps followed to construct a unit hydrograph of a drainage basin? 10

Group-'B'

Answer any one question:

5 x 1=5

5. How do you calculate evaporation rate from an evaporation pan? 5
6. Write the significance of rating curve. 5

Unit: GEO 195.2: Sedimentological Analysis

Group-'A'

Answer any two questions:

10 x 2=20

1. What is Phi scale? How will you calculate phi grain size? Represent the Krumbein phi scale. What are the methods of grain size distribution? What are the uses of grain size distribution curve?
 $1\frac{1}{2}+1\frac{1}{2}+4+1\frac{1}{2}+1\frac{1}{2}=10$
2. What is the difference between sedimentary rocks and sedimentary structures? What do you mean by Bioturbation structure? What factors might determine the extent and depth of bioturbation within sediments? Schematically represent Bioturbation Intensity Value. $2+2+2+4=10$
3. What do you mean by facies and facies analysis? What are sedimentary facies? Which characteristics of sedimentary facies give us the information of depositional environment? What is walther's principle?
 $3+3+2+2=10$
4. What do you mean by megascopic and microscopic examination of sediment? Write the megascopic characteristics of sandstone and conglomerate. $3+7=10$

Group-'B'

Answer any one question:

5 x 1=5

5. What is seismic facies and what do you mean by seismic facies analysis? $2+3=5$
6. Mention the physical characteristics of pebble. How are pebbles measured? What is Power Index of Roundness? $2+2+1=5$