



বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

M.A./ M.Sc. Examinations 2020

Semester IV

Subject: GEOGRAPHY

Paper: GEO - 496

(Practical)

Full Marks: 50

Time: 3hrs.

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

Paper /Unit: Geo 496.1 Map Transformation and Geodesy

Answer any One of the following questions

1. What do you mean by horizontal and vertical datum? Mention their significance with suitable examples?
2. How is a reference ellipsoid different from geoid and why both the surfaces are important in geodesy? Give suitable diagrams.
3. Describe the components of UTM Grid System with suitable diagram.
4. Explain the mathematical requirements of constructing Mercator's projection.
5. Why does the distortion in scale increase away from the area between the two standard parallel of a conical projection?
6. Give a proof of the following expression in Mollweide's projection. The ϕ is latitude and θ is auxiliary angle defined in the Mollweide's projection.

$$\pi \sin \phi = 2\theta + \sin 2\theta$$



Paper / Unit: Geo 496.2 Geographic Information System (GIS)

Answer any One of the following questions

1. Give an account of the evolution of data acquisition methods since the beginning of the inception of GIS.
2. What are the components of GIS? Why is database management (DBMS) important in GIS environment?
3. What are the basic requirements of developing a web-GIS application?
4. '3D GIS is about the geospatial analysis using height variable' - examine the statement in the context of basin morphometric analysis.
5. Explain in detail the components of space segment in GPS system.
6. Write a note on NavIC.