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COURSE TITLE: HYDROLOGY

COURSE CODE: CVE 302

1. Explain what is GIS and its key features

A geographic information system is a system designed to capture, store, manipulate, analyse, manage and present spatial or geographic data.

Features;

Location

Temporality

Complex spatial

Thematic values

Fuzzy objects

Entity versus field based data

Generalization

2. Use GIS to map and analyse data

1.Mapping: Mapping is a central function of geographic information system, which provides a visual interpretation of data.

2. Telecom and network services: GIS can be a great planning and decision making tool for telecom industries.

3. Accident analysis and hot spot analysis: GIS can be used as a key tool to minimize accident hazard on roads, the existing road networks has to be optimized and also the road safety measures have to be improved.

4. Urban planning.

3. Application of GIS software in hydrology

Water professionals need to be able to manage surface and groundwater resources over the scale of an entire watershed.

A GIS is a system of computer software, hardware, and data, combined with qualified people to assist with manipulation, analysis and presentation of information.

4. Procedures for utilization of Hydrological GIS

1.Identifying a suitable project.

2.Purchase or download of GIS software.

3.Accumulation of GIS data for processing.

4.Integrating the data acquired.

5. Examples of GIS tools

1.The buffer tool

2.The merge tool

3. The intersect tool

4.The union tool

5.The dissolve tool