

ASSIGNMENT NO 2:

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Subject: GSA

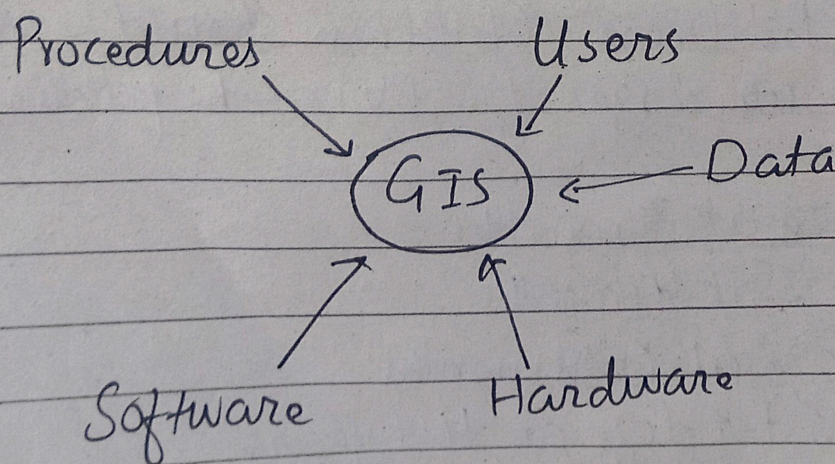
Submitted to: Sir Majida ~~Mahin~~
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- Q1. Components of GIS
- Q2. Food Additives / Food Preservatives.

QUESTION 1: What are the components of GIS.

COMPONENTS OF GIS:

A working GIS (Geographic Information System) has five key components: Hardware, Software, data, people, and procedures.



HARDWARE:

Hardware is the computer on which a GIS operates. Today, GIS software runs on a wide range of hardware types, from centralized computer servers to desktop computers used in stand-alone or networked configurations.

SOFTWARE: GIS software provides the functions and tools needed to store, analyse, and display geographic information. Key software components are:

- Tools for the input and manipulation of geographical information.
- Tools that support geographic query, analysis and visualization.
- A geographical user interface (GUI) for easy access to tools.

DATA: Possibly the most important component of a GIS is Data. Geographic data and related tabular data can be collected in-house or purchased from a commercial data provider. A GIS will integrate data with other data resources and can even use a DBMS, used by most organizations to organize and maintain their facts.

PEOPLE: GIS technology is of limited value without the people who manage the system and develop plans for applying it to real-world problems.

GIS users range from technical specialists who design and maintain the system to those who use it to help them perform their everyday work.

PROCEDURES:

A successful GIS operates according to a well-designed plan and business rules, which are the models and operating practices unique to each organization.

QUESTION NO 2: What are food additives / preservatives?

FOOD ADDITIVES:

Food additives are substances that are intentionally added to food during the processing or making of that food. They include antioxidants, preservatives, colouring and flavouring agents, emulsifiers, sweeteners and

anti-infective agents. Most food additives have little or no nutritional value. Food additives are added to add flavor to food, to preserve the natural characteristics of food, and to prevent decomposition by microbial growth or undesirable chemical changes.

TYPES OF FOOD ADDITIVES:

At present, 2500 food additives of all kinds are known. Some additives belong to more than one category. For example, Sugar is both a preservative and a Sweetener. There are two main types of Food additives, Natural and Man-made

Natural Food Additives:

- Herbs or spices to add flavor to food
- Vinegar for pickling foods.
- Salt: Since ancient times table salt has been a preservative for fish, meat, and beef.
- Sugar has been used to preserve jelly, ~~jams~~ fruit jams, and food preserve

Man-made food ^{Additives} ~~preservatives~~:

1. Preservatives: Preservative is a substance or a chemical that is

added to products such as food, beverages, pharmaceutical drugs, paints, biological samples, cosmetics, wood and many other products to prevent decomposition by microbial growth or by undesirable chemical changes. Preservatives prevent or slow down the growth of bacteria or fungi, so that food can be kept longer.

2. **Anti-Oxidants:** Slows down the oxidation of food fat in food. Also prevents oily or fatty food from becoming rancid.
3. **Stabilizers:** Mixes two liquids that usually do not mix together. They also prevent the sediment process in liquids and also provide a smooth and uniform structure.
4. **Bulking agents:** Increase the volume of food without majorly changing its available energy.
5. **Flavouring agents:** Add taste or fragrant smells to make food more edible.

6. Colouring agents: Colours food to make it look more attractive.
7. Emulsifiers: Prevent oil and water from separating, as well as keep fats from clumping together.
8. Food Acids: Influence the function of other substances in food, e.g. slows the growth of micro-organisms.
9. Glazing agents: Improve the appearance of food by imparting a coating to the surface, which can also protect it.
10. Foaming agents: Maintain the even dispersion of gas in aerated foods.
11. Propellants: Helps food propel out of container.
12. Thickeners and Vegetable Gums: Enhance the texture and consistency of food.