

32457 - Hamna Shoukat - 059

Assignment

Upload proper questions for evaluation; not notes.

Subject:

General Knowledge and Ability

Notes cannot be evaluated and marked

Topic:

Geographic Information System (GIS)

Computer system which is for storing and presenting the information in the form of maps

Components of GIS

GIS Components are the primary function to perform geo-spatial analysis. A geographic information integrates hardware, software, data capturing, managing, analyzing and displaying all forms of geographically referenced information.

The main & key components of Geographic Information Systems are:

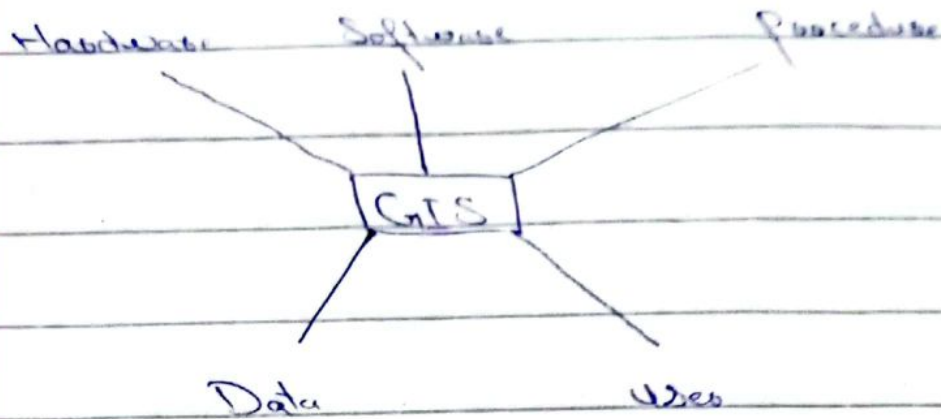
Hardware

Software

Data

User

Procedure



Hardware

Hardware is the computer system on which a specific GIS software is attached to a disk drive storage unit, used for storing data and running a program.

The main Hardware Components

are:

- Keyboard
- Processor
- RAM
- Hard Disk / SSD
- Graphics
- Monitor
- Printer

Software

GIS software is a major function of research, analysis, and display geographic information. GIS Tools help to query, edit, run and display GIS data. Some GIS softwares are;

- ArcGIS
- QGIS
- AutoCAD Map
- GAMA GIS
- MapInfo
- ILLIUS and more

The software components are

GIS Tools

- DBMS (Database Management System)
- GUI (Graphical user interface)
- Query Tools
- Layout

Data

The most important component of GIS is the Data.

A GIS will integrate spatial data

with other data resources and can even use a BDM. GIS Data is a combination of spatial and tabular data or Attribute Data. Spatial can be Vector and Raster.

Uses

People use uses of Geographic Information System, they can handle all the tasks in GIS software. Users can maintain design and technical specification. It has limited value without the people who manage the system and develops plans for applying it to real world problems. GIS user is called GIS Analyst or Engineer.

Procedure

Procedure is more related to the management aspect of GIS. It's referred to lines of reporting, control points and other mechanism for ensuring the high quality of GIS. A successful

GIS operates, which are the models and operating procedures unique, well designed and business rules to each organization. The procedures used to input, analyze and query data determine the quality and validity of the final product

Topic

Food Additive

Food additives are chemicals added to foods to keep them fresh or to enhance their colour, flavour or texture. They may include food colourings (such as tartrazine or cochineal) flavour enhancers (such as MSG) or a range of preservatives

Some of these substances have been associated with adverse health effects and should be avoided, while others are safe and can be consumed with minimal risk.

Here are the 12 of the most common food additives, plus recommendations for which ones to keep out of your diet.

1. MonoSodium Glutamate (MSG)

MSG is used to enhance the flavor of many processed foods. Some people may have a sensitivity to MSG, but it's safe for most people when used in moderation.

2. Artificial Food Coloring

Artificial food coloring may promote hyperactivity in sensitive children and can cause allergic reactions. Red 3 has also been shown to increase the risk of thyroid tumors in animal studies.

3. Sodium Nitrite

Sodium Nitrite is a common ingredient in processed meats that can be converted into a harmful compound called nitrosamine. A higher

intake of refined and processed foods may be linked to a higher risk of several types of cancer.

4. Guar Gum

Guar gum is a long-chain carbohydrate used to thicken and bind foods. It has been associated with better digestive health, lower levels of blood sugar and cholesterol, as well as increased feelings of fullness.

5. High Fructose Corn Syrup

Associated with weight gain, diabetes, and inflammation. It's also high in empty calories and contributes nothing but calories to your diet.

6. Artificial Sweeteners

Artificial sweeteners may help promote weight loss and blood sugar control. Certain types may cause mild side effects like headaches, but they are generally considered safe in moderation.

7. Carrageenan

Test-tube and animal studies

have found that Carrageenan may cause high blood sugar and could cause intestinal ulcers and growths. One study also found that Carrageenan contributed to an earlier relapse of ulcerative colitis.

8. Sodium Benzoate

May be associated with increased hyperactivity. If combined with vitamin C, it may also form benzene, a compound that may be associated with cancer development.

9. Trans Fat

Eating trans fats has been associated with many negative effects on health, including inflammation, heart disease and diabetes.

10. Xanthan Gum

May help reduce levels of blood sugar and cholesterol.

In large amounts, it may cause digestive issues like gas and soft stools.

11. Artificial Flavouring

Some animal studies have found that artificial flavouring may be toxic to bone marrow cells. More research is needed to evaluate the effects in human.

12. Yeast Extract

Yeast extract is high in sodium and contains in glutamate, which may trigger symptoms in some people. Yet because only small amounts of yeast extract are added to foods, it's unlikely to cause problems for most people.

The Bottom Line:

While certain food additives have been linked to some pretty, side effects, there are plenty of others that can be safely consumed as part of a healthy diet.

Start reading the ingredient labels when grocery shopping to take control of your diet and determine what's really being added to your favorite foods.

Additionally, try cutting back on processed and packaged foods and incorporating more fresh ingredients into your diet to minimize your intake of food additives.

Topic:

Malaysia

Malaysia is caused by parasites that enter your body through the bite of an infected mosquito.

This sometimes fatal disease happens in hot and humid places, like

Africa

Symptoms and Causes

What causes malaria?

When a mosquito bites

Someone who has malaria, the mosquito becomes infected. When that mosquito bites someone else, it transfers a parasite to the other person's bloodstream. There, the parasites multiply. There are five types of malaria parasites that can infect humans. In rare cases, people who are pregnant and who have malaria can transfer the disease to their children before or during birth.

It's possible, but unlikely, for malaria to be passed through blood transfusions, organ donations and hypodermic needles.

What are the signs and symptoms of malaria?

Signs and symptoms of malaria are similar to flu symptoms. They include:

- Fever and sweating
- Chills that shake your whole body
- Headache and muscle aches
- Fatigue

Chest pain, breathing problems and Cough.

Diarrhea, nausea and vomiting

As malaria gets worse, it can cause anemia and jaundice (yellowing of the skin and whites of the eyes).

The most severe form of malaria, which may progress to a coma, is known as cerebral malaria.

This type represents about 15% of deaths in children and nearly 20% of adult deaths.

How is malaria treated?

It's important to start treating malaria as soon as possible. Your provider will prescribe medications to kill the malaria parasite. Some parasites are resistant to malaria drugs.

Some drugs are given in combination with other drugs. The type of

Parasite will determine what type of medication you take and how long you take it.

Antimalarial drugs include:

- Atovaquone (Mepan[®])
- Mefloquine
- Quinine
- Primaquine

Medications can cure you of malaria.

Preventions:

If you plan on living temporarily in or travelling to an area where malaria is common, talk to your provider about taking medications to prevent malaria. You will need to take the drugs before, during and after your stay. These drugs can not be used for treatment if you do develop malaria despite taking them.

You should also take precautions to avoid mosquito bites. To lower your chances of getting malaria, you should:

- Apply mosquito repellent with DEET (diethyltoluamide) to exposed skin.
- Drape mosquito netting over beds.
- Wear long pants and long sleeves to cover your skin.

Topic

Typhoid

Typhoid fever is an infection that causes fever, diarrhea, and a rash. It is most commonly caused by bacteria called *Salmonella typhi* (*S typhi*).

Alternative Names

Enteric Fever

Causes

S typhi is spread through contaminated food, drink or water. If you eat or drink something that is contaminated with the bacteria, the bacteria enter your body. They travel into your intestines, and then into

Your blood. In the blood, they travel to your lymph nodes, gallbladder, liver, spleen, and other parts of the body.

Some people become carriers of *S. typhi* and continue to release the bacteria in their stools, sometimes for years, spreading the disease.

Typhoid fever is common in developing countries. Most cases in the United States are brought in from other countries where typhoid fever is common.

Symptoms

Early symptoms include fever, general ill-feeling, and abdominal pain. High fever (103°F , or 39.5°C) or higher and severe diarrhea occur as the disease

gets worse.

Some people develop a rash called "rose spots", which are small red spots on the abdomen and chest.

Other symptoms that occur include:

• Bloody stools

• Chills

- Nausea
- Severe fatigue
- Slow, Sluggish, weak feeling
- Difficulty paying attention

Treatment

Fluids and electrolytes may be given by IV (into a vein) or you may be asked to drink water with electrolytes packets.

Antibiotics are given to kill the bacteria. There are increasing rates of antibiotic resistance throughout the world, so your provider will check current recommendations before choosing an antibiotic.

Prevention

A vaccine is recommended for travel outside of the United States to places where there is typhoid fever. The Centers for Disease Control and Prevention website has information about where typhoid fever is common.

www.cdc.gov/typhoid-fever/index.html

Ask your provider if you should bring electrolyte packets in case you get sick.

When travelling, drink only bottled or bottled water and eat well-cooked food. Wash your hands thoroughly before eating.

Water treatment, waste disposal and protecting the food supply from contamination are important public health measures. Carriers of *S. typhi* must not be allowed to work as food handlers.