

"General Science and Ability"

NOA-MOCK6

Name: Muhammad Amin

Batch: 006-MOC25-NOA-IsB1

LMS ID: 37118

Email: maminkaloch022@gmail.com

Phone : 0312-5382277

Date : 19/12/024

* PART-II *

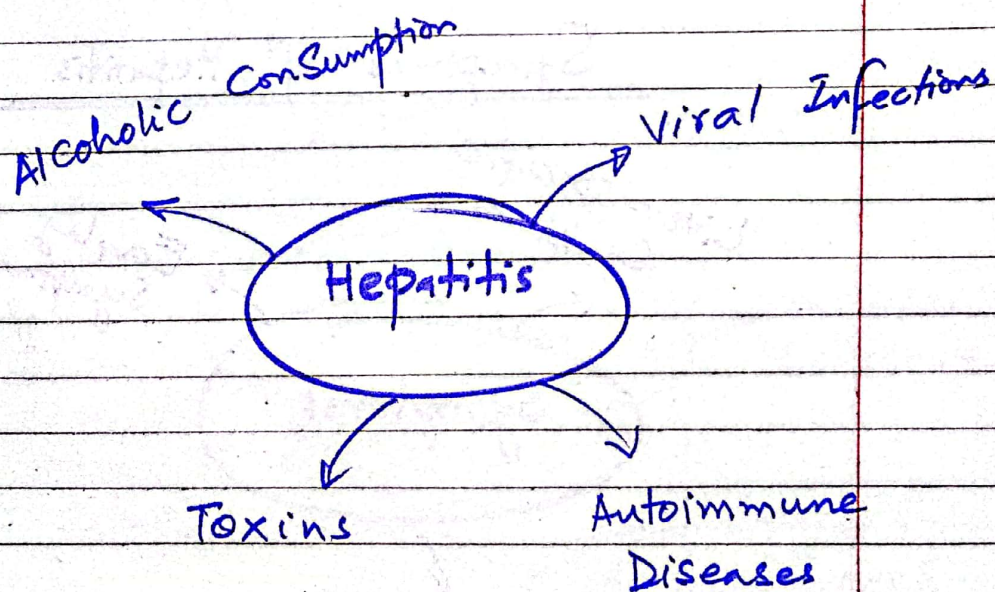
* Section-I *

⇒ (Question #04) ↵ "A"

Defining Hepatitis

Hepatitis is an inflammation of the liver. It is a disease caused by various factors.

Causes of Hepatitis



i. Viral Infection:

Hepatitis A, B, C, D, and E viruses.

ii. Alcohol Consumption :

The excessive alcohol intake can damage liver cells. It is also known as alcoholic hepatitis.

iii. Toxins :

Certain drugs like excessive use of antibiotics, and chemicals can cause inflammation.

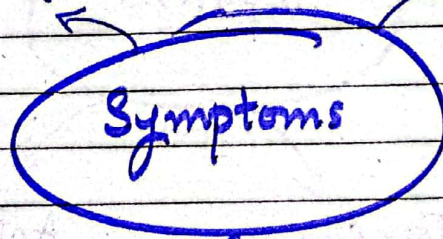
iv. Autoimmune Diseases :

The immune system mistakenly attack the liver.

Symptoms of Hepatitis

Liver-specific
Symptoms

Early
Symptoms



Chronic Hepatitis
Symptoms

i. Early Symptoms:

Fatigue, fever, loss of appetite, nausea, and vomiting.

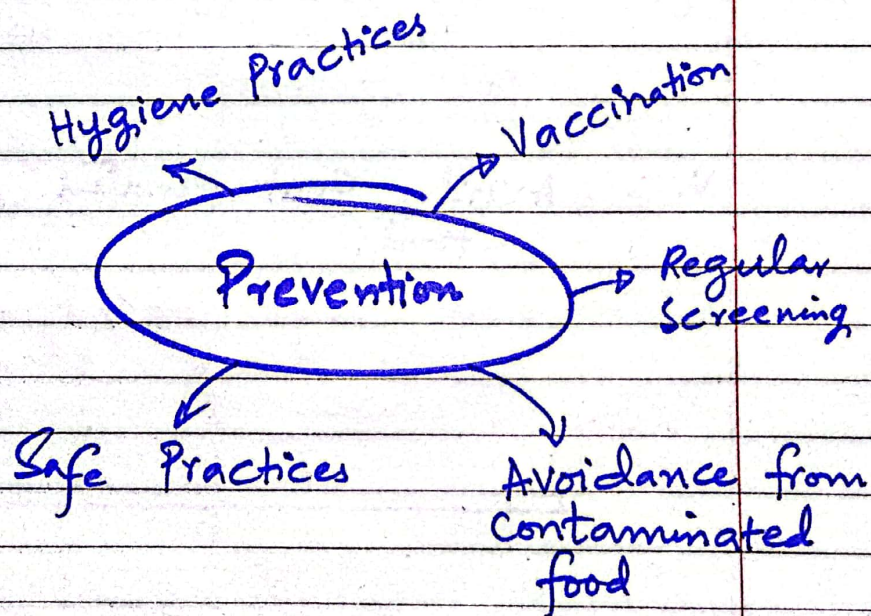
ii. Liver-Specific Symptoms:

Jaundic, Dark urine, pale stools, Abdominal pain or legs.

iii. Chronic Hepatitis Symptoms

- Persistent fatigue and liver scarring.

Prevention of Hepatitis



i. Vaccination:

- Vaccines are available for Hepatitis A and B.

ii. Hygiene Practices:

- Drinking clean water
- Washing hands thoroughly after using bathroom and before eating.

iii. Safe Practices:

- Avoid sharing needles or razors.

iv. Regular Screening:

- Regular checkups, if there is high risk of Hepatitis

v. Avoid Contaminated Food:

- Eat well-cooked food, and drink clean water.
-
-

Q.4(B)

Methods of Food Preservation

There are various methods of Food Preservation. The important ones are illustrated below:

Methods

- Refrigeration
- Canning
- Drying
- Pickling
- Pasteurization

i. Refrigeration:

It is the storing of the food at a very low temperature. It slows down the bacterial growth and enzyme activity.

Example: Dairy, fruits, vegetables are kept in refrigerator for longer life.

ii. Canning:

Food is sealed in airtight containers and heat-processed to kill bacteria.

Example: Canned fruits, Juices, Vegetables etcetera.

iii. Drying: (Dehydration)

It is the removing of moisture from the food to prevent bacterial growth.

Example: Dried fruits, etcetera.

IV. Pickling:

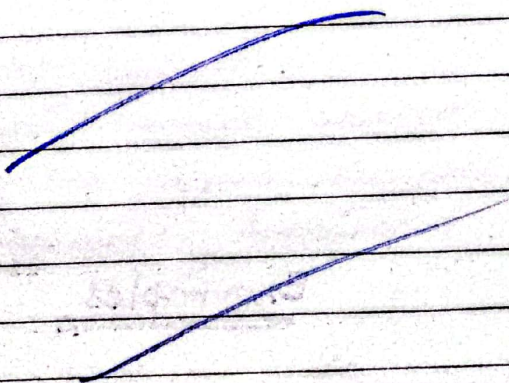
Preserving food in an acidic solution usually vinegar or salt water.

Example: Pickled cucumbers, onions, and olives.

V. Pasteurization

- It is the heating of liquids to a specific temperature to kill harmful bacteria without altering taste.

Example: Milk, Juices, and some alcoholic beverages.



Q#4 (C)

Fertilizers

Definition: The fertilizers are the substances applied to soil or plants to supply essential nutrients. They promote plant growth and increase crop yield.

Types of Fertilizers

The fertilizers can be broadly classified into two main categories: Organic and Inorganic.

i. Organic Fertilizers

These fertilizers are made from natural materials, such as plant or animal waste.

Examples

- Animal Dung, and Urine
- Decomposed organic matter

- Crushed animal bones, rich in phosphorus.

ii. Inorganic Fertilizers

These are also known as chemical fertilizers. They are synthetically manufactured to provide specific nutrients.

Examples

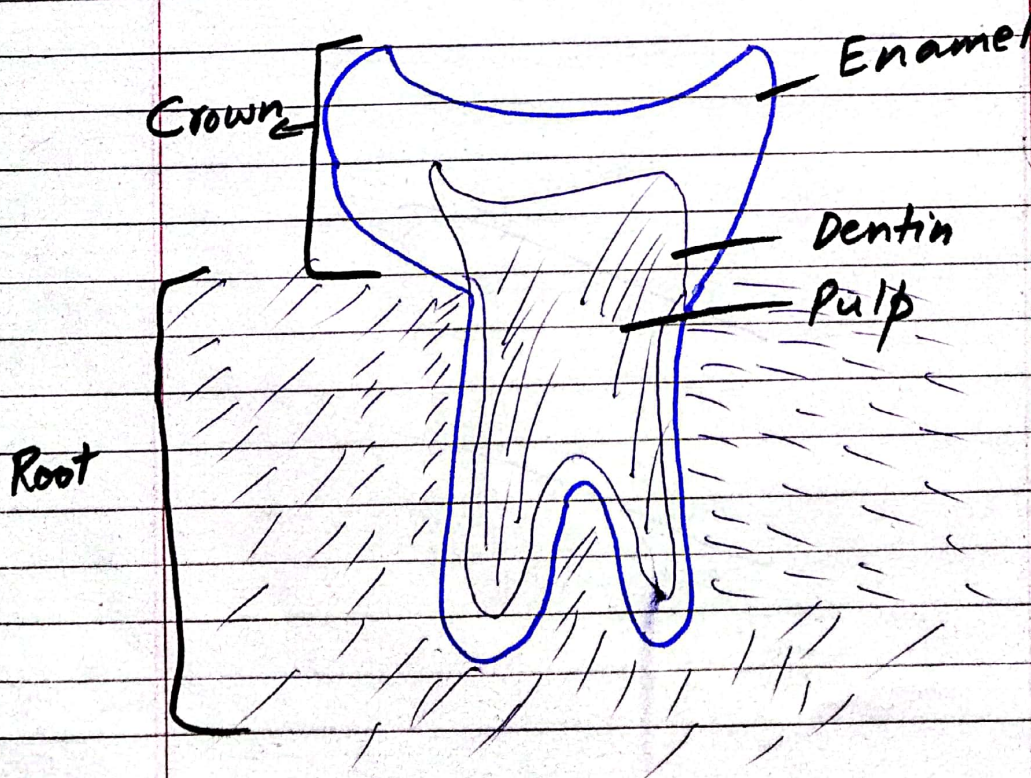
- NPK fertilizers
- Urea

Q#4(D)

Defining the Anatomy of Human Tooth

The anatomy of a human tooth is composed of several layers and parts, each with specific function.

Tooth Anatomy

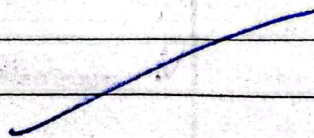
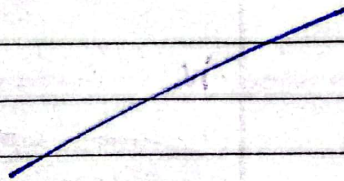


i. **Crown:** The visible part of the tooth above the gumline.

ii. **Root:** The portion of the tooth embedded in the jawbone.

iii. **Pulp:** Innermost part of the tooth.

iv. **Dentin:** Beneath the enamel and extend into the root.



Question #05A

'A'

Difference between Eukaryotic and Prokaryotic Cell:

Differences

| Eukaryotic Cell | Prokaryotic Cell |
|--|--|
| i. These cells are with true nucleus. | i. These cells are without a nucleus. |
| ii. They are enclosed by a membrane. | ii. Genetic material is free-floating. |
| iii. Larger Diameter | iii. Smaller Diameter |
| iv. Linear DNA structure and arranged in chromosomes | iv. Circular DNA and without histones |
| v. Larger Ribosomes | v. Smaller Ribosomes |
| vi. Having Cell wall in plants and Fungi. | vi. Having cell wall in most. |

Q#5(B)

What is Global warming?

Global warming refers to the gradual increase in Earth's average surface temperature. It is due to the excessive release of greenhouse gases, such as CO_2 , methane (CH_4) and nitrous oxide (N_2O).

What is Kyoto Protocol?

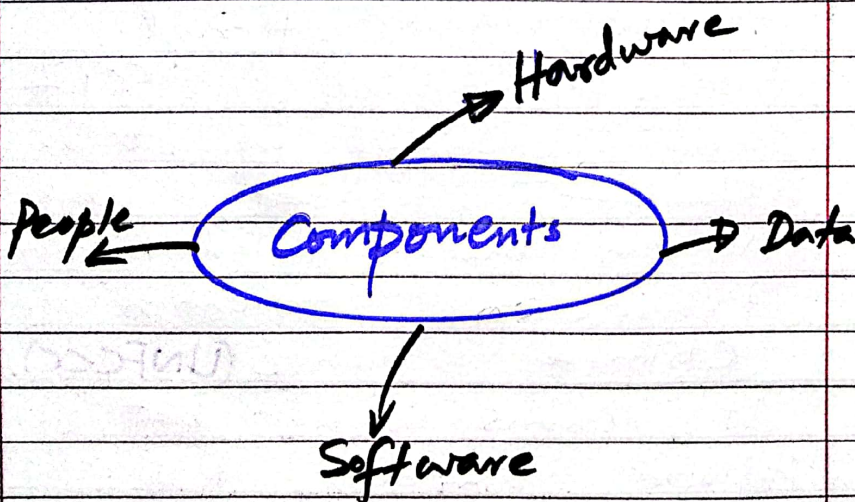
The Kyoto Protocol is an international treaty adopted in 1997 and enforced in 2005. Under this treaty was under the United Nations Framework Convention on Climate Change (UNFCCC). It aims to combat global warming by reducing greenhouse gas emissions.

Q#5(C)

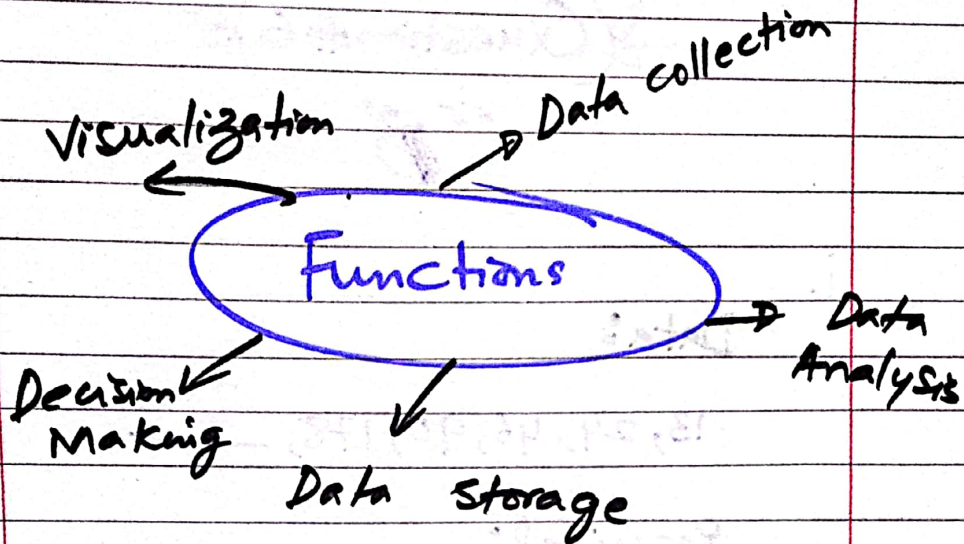
Geographic Information System (GIS)

Definition: A Geographic Information System (GIS) is a technology that integrates hardware, software, and data to capture, store, manage, analyze, and display geographically referenced information.

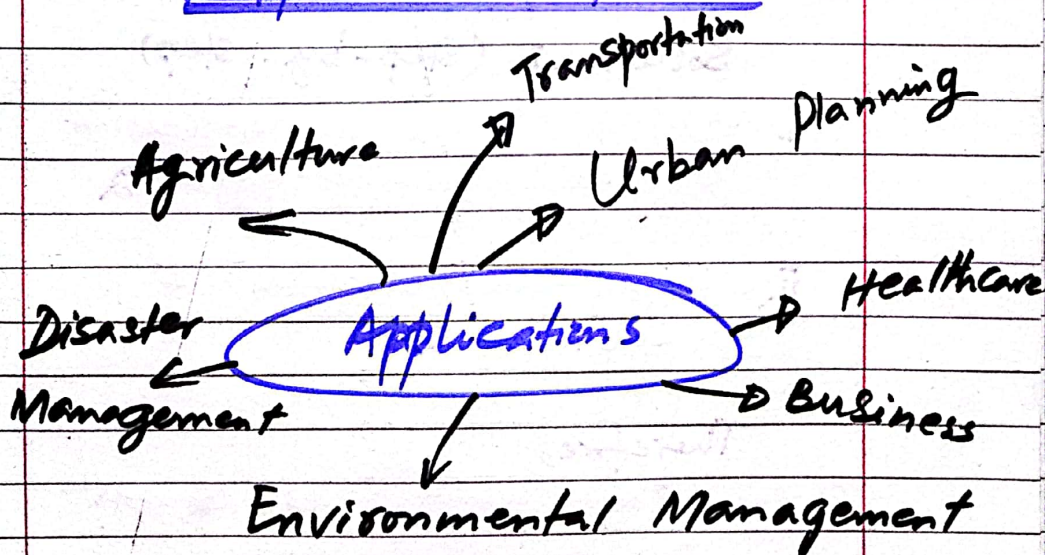
Components of GIS



Functions of GIS



Applications of GIS



* Section-II *

Question # 6

"D"

i.

Data:

13, 24, 46, 90, 178, —

Required:

missing number in
the series?

Solution: (Step-by-step)

i. It is the multiplication
of each number with 2

ii. After multiplication it
subtract 2.

Therefore,

The required series
will be

13, 24, 46, 90, 178, 354

Required Answer

ii.

Data:

5, 6, 9, 14, 21, _____

Required:

missing number in
the series?

Solution:

5, 6, 9, 14, 21; 30

Step-by-step:

i. It is adding the
odd numbers with
each numbers.

ii. Firstly, He adds $1+5=6$
 $3+6=9$
 $5+9=14$
 $7+14=21$
 $9+21=30$

Hence this is the
required answer

(c)

Data:

Diameter of circle = 6cm

Required:

Circumference of a circle?

Area of circle?

Solution:

Since, the Diameter of a circle = 6cm

then by using formula,

$$d = 2r$$

$$6 = 2r$$

$$\Rightarrow \frac{6}{2} = r$$

$$\Rightarrow \boxed{3 = r}$$

To find Circumference,

$$C = 2\pi r$$

Then

$$C = 2 \left(\frac{22}{7} \right) (3) \quad \because \pi = \frac{22}{7}$$
$$= 6 \left(\frac{22}{7} \right)$$

$$C = \frac{6 \times 22}{7} \quad (A)$$

$$= \frac{132}{7}$$

$$\underline{C = 18.85 \text{ cm}}$$

And

Area of circle,

$$\underline{A = \pi r^2}$$

$$= \left(\frac{22}{7}\right) (3)^2$$

$$= \left(\frac{22}{7}\right) 9$$

$$= \frac{198}{7}$$

$$\underline{A = 28.28 \text{ cm}}$$

Hence the required
Answer

(A)

Data:

Sum of 3-digit number = 15

Sum of 10th and unit digit = 12

Difference of unit digit
from 10th digit = 2

Required:

What is three digit
number.

Solution:

$$\text{Let } x + y + z = 15$$

And,

$$y + z = 12$$

$$y - z = 2$$

Then, we can assume
the number is 357

Here $x = 3$, $y = 5$, $z = 7$

Required Answer

Question #08

(A)

Data:

- The width of a rectangular room is 60% of its length
- length of the classroom = 15 ft

Required:

What are room's dimensions?

Solution:

To find the dimension of a rectangular, we will use the formula,

$$\text{Area of Rectangle} = A = l \times w$$

Since,

$$l = 15 \text{ ft}$$

Then

$$w = \frac{60}{100} \times 15$$

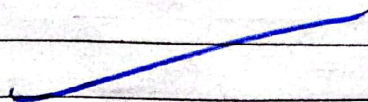
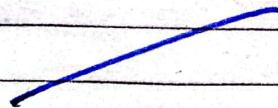
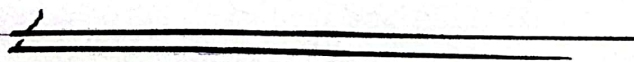
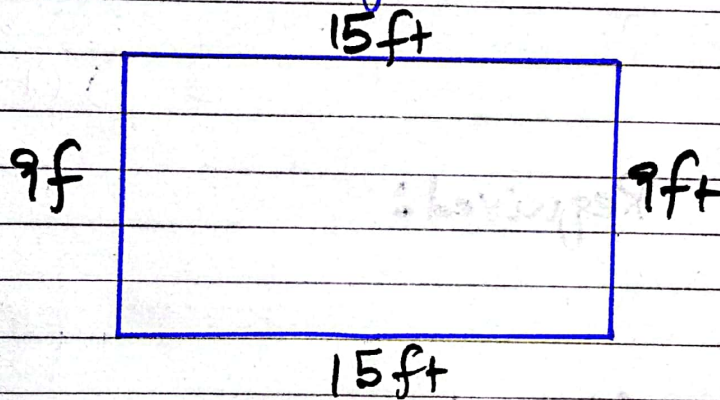
$$w = 9 \text{ ft}$$

So, the dimensions of rectangle will be

$$l = 15 \text{ ft}$$

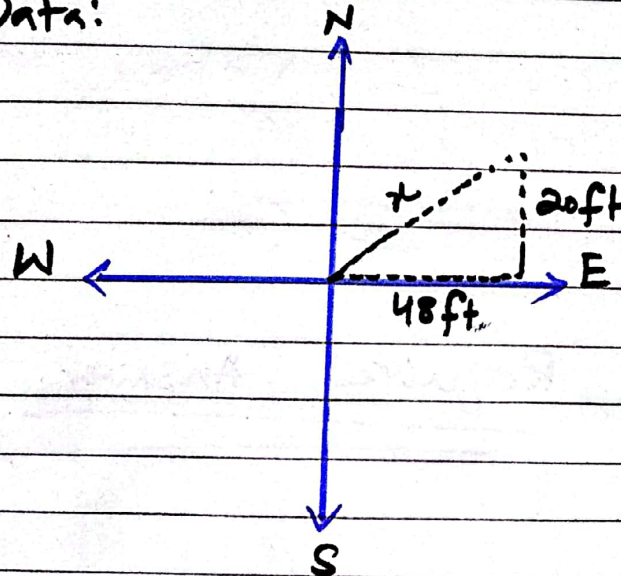
$$w = 9 \text{ ft}$$

Geometrically:



(B)

Data:



Required:

Venna's total Distance?

Solution:

By using Pythagoras theorem,

$$\overbrace{(\text{Hyp})^2 = (\text{Perp})^2 + (\text{Base})^2}$$

Here,

$$(x)^2 = (20)^2 + (48)^2$$

Taking square root on b.s

$$\sqrt{x^2} = \sqrt{(20)^2 + (48)^2}$$

$$x = \sqrt{400 + 2304}$$

$$x = \sqrt{2704}$$

$$x = 52$$

Hence, If Veena ran directly, she covers

$$\underline{\underline{52 \text{ ft}}}$$

Required Answer

