Kiran Shahzadi GSA - Test -2

Question # 2

- 2b

Enzyme:

Enzymes are made up of Proteins. an organic Component composed of Polymers of amino acids. ~~It~~ is Enzymes ~~are~~ speed up Chemical Processes in human body by working as an accelarating agent. Enzymes are essential for digestive system, respiration System, nerve system etc.

Characteristics of Enzymes

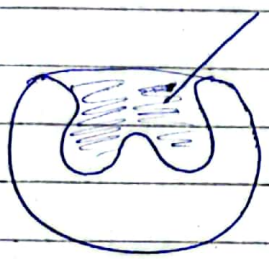
- An essential accelerating agent in human body.
- Works best under certain Ph level as well in certain temprature level. For instance, enzymes works best at 37°C body temprature. while work slowly on low Ph level. For instance it works at 7Ph level in intestine and at 2 Ph level in stomach.

Function

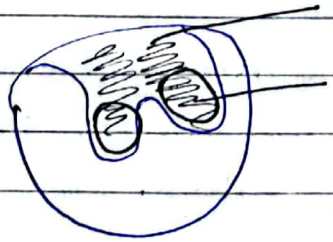
Mechanism of Actions

In human body enzymes have

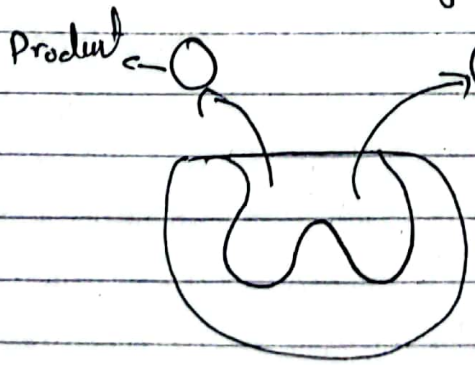
a Particuler active side to which Substrate attach thiselves and convert it to Products which further do the same to another active side of another enzymes.



Substrates.



substrate get attached to active side of enzymes → become Enzyme-substrate complex.



Enzyme

- In stomach enzymes break down large substances into smaller molecules e.g glucose. So that the digestive system can assimilate.

- In liver enzymes break down toxin harmful toxins.

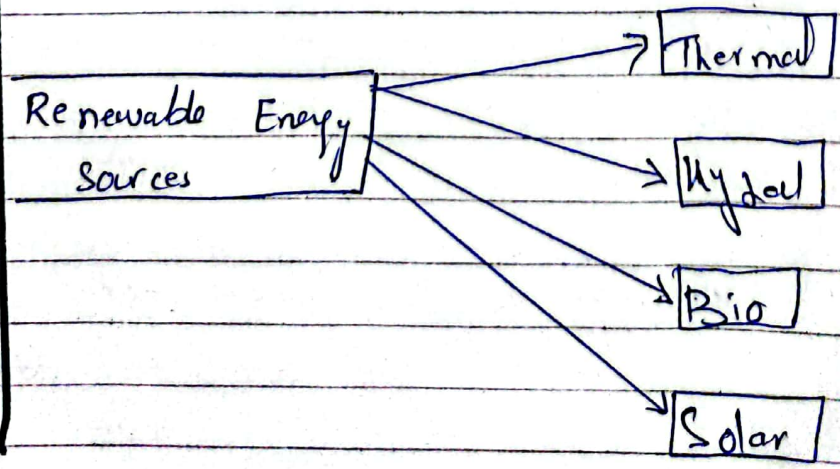
Conclusion:

Enzymes are essential compound of body which is needed to accelerate functions of different body organs without enzymes the same will be slower. Hence, enzymes are important for body.

Question (a c)

Renewable Energy and Environmental Cost

There has been incurred huge environmental costs due to use of non-renewable energy resources such as increasing carbon emissions, global warming, climate change, which ultimately results in environment hazards for instance: floods, unpredictable rain and weather patterns, droughts, melting of glaciers, etc. The same can be manage through transition in energy system by transfering from non-renewable to renewable sources of energy.



Reducing Environmental Cost through Renewable Energy Resources

Renewable energy resources can reduce environmental cost through following changes:

- **Improving Air quality:**

Transition from non-renewable energy resources to renewable resources will leads to improve air quality as there will be less input of harmful substances in air eg sulfur dioxide, nitrious gases etc.

- **Reduction in Carbon Emission and GHG:**

Renewable energy resources will lead to less usage of fossil fuels and other materials which emit carbon dioxide and other green house gasses which resultantly reduce ozone layer depletion and save environment from harmful ultra violate rays. Hence, it will reduce environmental costs.

- **Less Mining and Drilling:**

Transition to renewable resources will reduce mining and drilling activies. which will lead to reduce for instance: Coal mining, for energy production. during mining

Protect the harmful subsats of coal evaporate in our mereove. it shakes earth balance which generates natural hazards such as land sliding, earthquake, etc. and Pollute atmosphere. renewable energy will reduce this activity and save environment from such incidents.

- **Waste Reduction:**

Renewable energy resources produce less waste as compare to wastage produce from non-renewable energy plants. It requires less land to dump these wastes. So, renewable energy Plants reduce waste as well as save Land from harmful waste management produced by non-renewable energy plants.

Conclusion:

Transition from non-renewable to renewable energy resources will save environmental cost by reducing hazardeous climb of non-renewable sources. ~~Such~~

Question 2d

- **Remote Sensing:**

Remote sensing is a technology which observe earth without being in

direct contact or touch. Remote In remote sensing system it receive different information from earth through different wave lengths. Later it conf convert information to which can recorded through sensor from emmitted energy from earth into image form of information. Then extract the required information related to problem at the end produce a required solution.

- Principles of Remote sensing:

Sensor → energy emitted → recorded by recorder → converted to image information → from which extract required information related to Problem → Solution Produce.

- Environmental Application of Remote sensing:

There are multiple application of Remote sensing which are related to environmental elements.

- Water Quality and Availability:

with Remote sensing water quality and availability can be checked to measure and predict water usage and whether there will be water shortage or not and to determine if there is any water contamination or not.

- **Check Sea Level:**

Remote sensing is used to measure sea level in order to predict any of flood chances.

- **Check Soil Quality**

With Remote sensing soil quality can be check to Predict fertility level of soil which can be helpful in measuring total irrigation, crable land, and to Predict crop production which will safe from dmy food related issues.

- **Demographic Information:**

With Remote sensing, demographic information can be measured of any area in order Predict and measure resource utilization and requirement of a particular area. and to formulate needs of those areas.

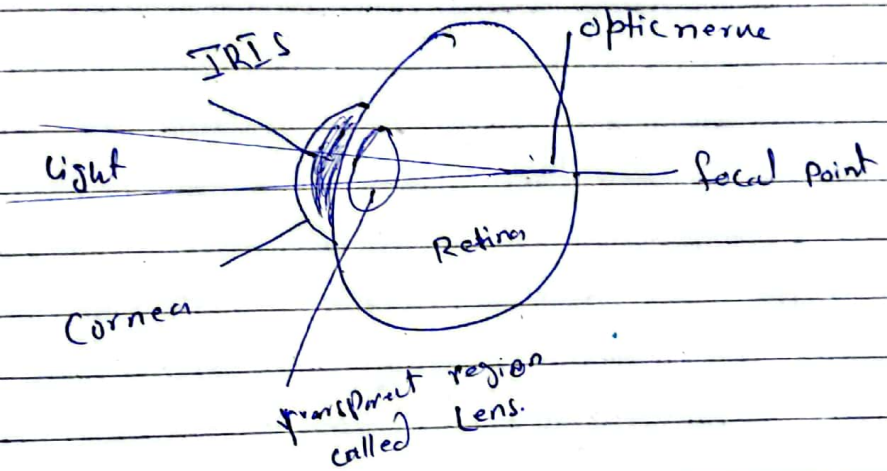
Conclusion:

Remote sensing is an important technical addition which has multiple environmental application. The same helps to measure and Predict any environmental requirement and emergencies of near future.

Question # 3 a

Working of Human Eye:

The human eye is responsible to convert light originated from an object to an image to brain cells through this process human eye sees objects this five (5) working steps ~~are~~. which are as follows.



- **Entering of Light.**

A light emitted from object enters into eye from transparent layer on eye called cornea.

- **The colored Area of Eye:**

From cornea this light enters into an area of eye which is Iris the one has colour.

- Transparent Lens

The light then enters into eyes thrugh contact of Iris to transparent area called Lens which is behind Iris. It works with cornea. The lens bends and focuses light.

- Entering Light into Retina:

Then comes Retina whil converts light into signals as Retina is a photoreceptor.

- Signals Enters to Brain:

The signals converted by Retina's Photoreceptor, then travels to brain and create an image which is Procened to human brain.

Conclusion:

~~Though~~ The human eye human's Procen light into form of image. Through a 5 stages Procem..s

Question # 3b:

Symptoms of Malaria and Dengue

Malaria and dengue has almost same symptoms but varies with intensity.

Malaria:

In Malaria Patient has high fever arount 100 °f, watery loose motion – diarhea, body pain, fatigue, joint pain, vomiting, nausea.

Dengue:

On the other hand in dengue patients have high fever arount 104 °f, extreme body pain, joint pains which is severe and stays for a while, head ach which feels like a piercing in head, extreme weakness which needs time to recover. even after cure of dengue. moreover, there is a Pressure and pain in eyes as well.

- Preventions of Malaria and Dengue:

There are many Preventive measures which can be taken to safeguard afainst dengue and malaria. Such as:

Eliminate standing water:

First of all clear standing water e.g outside home which is a

major source of dengue and malaria mosquitoes.

- Proper Waste Management
  Secondly there must be proper waste management specially in residential areas so that harmful breeding of harmful insects and mosquitoes can be curtailed.

- Use of Insect repellent creams.
  There are many creams and lotions available in market to apply on skin which repel mosquitoes and other harmful insects to bite.

- Use of Insect Prevention Net:
  In market insect prevention nets are available which can be use to sleep inside of these nets. These nets prevents mosquitoes to enter inside. and safeguard from their bite.

- Avoiding Peak Hours of mosquitoes.
  People shall avoid peak mosquito hours e.g after sunset during mosquito seasons to prevent mosquito to attack.

Conclusion:

Malaria and dengue have almost same symptoms varies in severity and needs to take same preventive measures

as both are caused becuse of mosquito bite. So, there is a need to take Prevtive measures to safeguard from these ~~her~~ dangerous diseases.

Question # 3C

Eutrophication:

Eutrophication is a phenomenon which describes Presence of alcem neutrients in water which lead. to abundant production of small unwated plants in water eg algae.

- **Causes of Eutrophication:**

Fertilizers and Rain:

There is an inireasing tendency of using chemical aebled fertilizer to increase crop production which leads to other issues as well such as when rain - falls happens specilly ~~in~~ during heavy rainfalls these fertilizers which are added into crops runs out mixed with rain water and ultimately adds to canal, river, sea water which leads to Production of algae in these water reservoirs.

Industrial and Domestic waste

Waste produced weather from

industries or domestic. do not treate Properly which leads to dump there chemicals filled wastage to Sea water. These chemicals filled with nitrogen produce due to nutrients plants in water surface.

Effects of Eutrophication:

Environmental Effects

Eutrophication leads to harmful impacts on environment such as algae on sea surface will not let sun light to enter into sea which damages marine lives. as oxygen depletion which creates dead zones in equator life.

Human health issues:

Eutrophication leads to harmful imputs on human health as it produces toxins in water eg when this algae chemical filled nutrients enters into ground water, as well as rivers, water of which is used for consumption. leads to diseases on human health.

Economic Imputs:

There are a few ecomic imputs of eutrophication eg fisheries will effect from it as due to ten oxygen and ten son rays entering into sea, marine life will get disturbe, low breed of fishes will decrease, which will damage fishery industry, moreover algae filled areas becom ten attractive for tourism, furthermore governments will need to treat toxin rich contaminated water to clean for consumption which increase government expenditure.

Conclusion:

Eutrophication has many courses as well as many harmful effects on enviroment, human health, economy of state, etc. which need to be treated with timely measures.

Question # 3d:

GPS	GIS
- GPS- Global Positioning System is used to locate locations.	GIS - Geographic Information system - is used to get all information about geography.
- Every GPS has it own clock, Computer and radio	GIS - It store, analyse, display information.
- It is use to provide exact location of anything as it receives information from satelites orbiting around the earth.	It is a data based functional technical instrument which provide solutions of problems through treatments of data.
- It is applied for navigation information.	It is designed for decision making assistance
- Accuracy depends on distance - it works best under 10km distance.	Accuracy of GIS ~~data~~ depends on data received and captured from spatial data and software it uses.