Q. No. 2 Part (i) (i) سوال نمبر 2 حصہ

Plasma and it's Importance

* Plasma
  - is 55% of our total blond composition part.
* It is very important as it has 90% water and water is the main element circulating in body. Moreover, it has 7% to 8% protein that are required in clotting and building new cell process.
* It also have 2% to 3% inorganic or organic substances ; overall it is very important as it has water (helpful in absorbing).

Q. No. 2 Part (ii) (ii) سوال نمبر 2 حصہ

Role of lipids

* Lipids :- fats like butter, ghee e.t.c collectively are called "lipids".

Role

1. fats (lipids) provide us double amount of energy than carbohydrates and protein.
2. They are very important in making structure of cell.
3. Process of assimilation i.e. growth of cell & production of new cells are also controlled by lipids.

Q. No. 2 Part (iii) (iii) سوال نمبر 2 جز

Genetic Engineering (Agriculture).

* Genetic Engineering
  ↳ means to study the genes & inheritence of an organism.

* Benefits in Agriculture field

1. Genetic Engineering is used to remove difficulties or weakness from crops.

2. It help grow more yeild (crops) by altering a gene of a plant in another.

3. It help control insect and pest by emmiting genes of those plants who have less.

Q. No. 2 Part (iv) (iv) سوال نمبر 2 جز

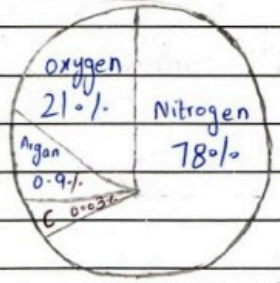
Basic Principles of first aid

Principles	Summary
1. Restoration of Airway	Make sure the person's throat & lungs are safely taking air.
2. Restoration of Breathing	Make sure the injured person is breathing.
3. Restoration of Circulation	Make sure the person blood is circulating efficiently in body.

Q. No. 2 Part (v) سوال نمبر 2 جز (v)

Composition of Atmosphere

1. Nitrogen ⟶ 78%
2. Oxygen ⟶ 21%
3. Argan ⟶ 0.9%
4. Carbon dioxide ⟶ 0.03%
5. Water wapours are in various forms.



• Pie Chart

Q. No. 2 Part (vi) سوال نمبر 2 جز (vi)

Deforestation & it's affects

• Deforestation
↳ excessive cutting down of tress; usually for building infrastructure.

~~Effects~~

1. Ecosystem get highly disturbed as animals, plants, birds shelter's are removed too.
2. Oxygen levels goes down resulting in more breathing problems.
3. The chances of rain decreases & temperature goes high (hot).

Q. No. 2 Part (vii) (vii) سوال نمبر 2 جز

Role of tube Well [Mechanization]

* Mechanization
  ↳ process of using high technology like:- tractors, tubewells rather than hand tools.

* Role of tube wells

1. They help water a huge field quickly & efficiently.
2. They are helpful in saving of water too.
3. The water from tube well is clean is have less quantity of salt so, less damaging.

Q. No. 2 Part (viii) (viii) سوال نمبر 2 جز

Laser VS Ordinary light

Laser	Ordinary light
1. Laser travel in one direction with some or no spreading.	Ordinary light trave in many direction with a lot spreading.
2. It produce a very pure single color beam.	It produces beam of many colors.
3. Laser is used in welding of retina in our eye's e.t.c.	It doesnot do or is possible to do any operation.

Q. No. 2 Part (ix) سوال نمبر 2 جز (ix)

* **Holograph**

Holography is a type of three-dimensional image made using laser & mirrors. unlike normal image which makes photo from one angle. Holograph shows all sides from different angles.

* **Uses**

1. Holograph is used in schools to show human or animals anatomy.
2. It is also used in bussiness to make a product design.
3. It is also helpful to check plant's.

Q. No. 2 Part (x) سوال نمبر 2 جز (x)

Ultra Sound VS X-rays

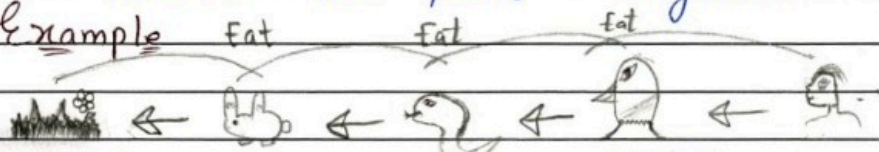
Ultra Sound	X-rays
1. It is soundware higher than 20 hz and have no affect on the human body.	• are lightwaves & are stronger 100x times than normal energy and can damage or have bad affect.
2. It can pass through many things.	• It can only pass through some things like:- wood, plastic e.t.c.
3. It can also be done to pregnant womens	• Not recommended; can damage baby.

Q. No. 2 Part (xi) سوال نمبر 2 جز (xi)

* Ecosystem

- An ecosystem is the system that every other organism need another to survive, include living together or working together too. Ecosystem keeps the efficient flow of earth. It help balance the animal and plant kingdom.

* Example



This shows how ecosystem works the grass, rabbit, snake, chicken, human rely on eachother.

Q. No. 2 Part (xii) سوال نمبر 2 جز (xii)

Plastic Recycling

* Recycling
  ↳ means to use & to make useful work from damaged or not usuable stuff.

Plastic Recycling

1. Plastic is very important to recycle as burning or dumping in water produces harmful gases.
2. Plastic can be recycled & gained to use again for productive purpose.
- This process is called "Bio Conversion".

(Section C)

Q. No. 3 (Page 1) SECTION-C سوال نمبر 3 (صفحہ 1)

* HUMAN Blood is main transporting fluid in human body. It help excreate the body & absorb nutrient. It's a sign of life.

Composition

1. Plasma [55%] 2. Cell [45%]

* Human blood cells

Human's ~~blood~~ have 45% cells in our blood and they play a very important role in our body. Without these cells the person will die.

* There are 3 main blood cells :-

1. RBC

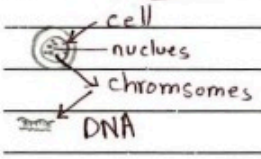
• RBC means "Red blood cell". These cells are very important. There's a pigment called "heamoglobim" in our RBC which is responsible for transporting oxygen in the body. The life span of RBC is 120 days. After every 120 days old cells are destroyed and new are made. Every millimeter of our blood has around 5 million Red blood cells.

Q. No. 3 (Page 2) سوال نمبر 3 (صفحہ 2)

• RBC main work or function is to transport oxygen.

• Every cell in human body has a nucleus in middle & inside that cell there's chromosomes and inside those chromosomes comes DNA.

Cell



RBC



RBC ; they are red in color.

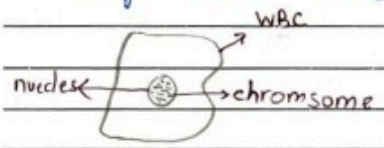
2. WBC

WBC means "white blood cells". They play a very important role in :-

• clotting of blood
• Provide energy & protect from diseases.

* Each per milliter of blood has 7000 to 8000 WBC

* They are irregular in shape.

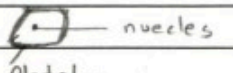


Q. No. 3 (Page 3) سوال نمبر 3 (صفحہ 3)

3. Platelets

* They are very important as well and are needed to known blood type & also play a very important role in clotting of blood.

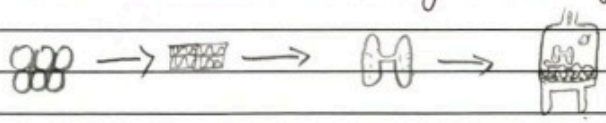
* Each per millimeter of blood has 275,000 to around 265,000 of them.



* Cells are joined with each other making a tissue; these tissues joined to make organ & organ to organ system & lastly organism

In short

Cell → tissue → organ → organ system



Q. No. 4 (Page 1) سوال نمبر 4 (صفحہ 1)

~~VA~~

VITAMINS

are required by our body in less amount but are very important as they help our body to function properly.

* There are 2 types of them :-

1. Water stuble → B, C
2. Fat soluble → K, E, D, A

* Fat Soluble vitamins.

① Vitamin A

* vitamin A is very important and is found in egg, milk etc. It helps in growth of our body. It promotes skin health with hair health too. It is highly important as it's deficiency can cause "night blindeness".

• It is also highly found in fish.

② Vitamin D

• The main source of vitamin D is sun. Vitamin D is very helpful as it

Q. No. 4 (Page 2) سوال نمبر 4 (صفحہ 2)

makes our teeth and bones stronger. Vitamin D is a highly important vitamin as ; not only , make bones stronger but without vitamin D the absorption of minerals like calcium and phosporus decreases.

(3) Vitamin E

• Vitamin E found in fish , oil, ghee e.t.c. is a very important vitamin. It helps in formation of cell & keeps our body hydrated.

• It can be taken as pills so, that you don't have deficit of it in your body.

(4) Vitamin K

• Vitamin K provide our blood protection and help body (blood clotting. It is founded in red - meat and spinach.

• It's deficiency can cause imbalance in the flow of blood.

• It can also be taken as medicine.

Q. No. 4 (Page 3) سوال نمبر 4 (صفحہ 3)

Q. No. 5 (Page 1) سوال نمبر 5 (صفحہ 1)

SPARCENT

* Pakistan has it's own organization to explore space called "SUPARCO". It's main ~~office~~ reasearch center is in Karachi.

* The SUPARCO is divided into 4 main division known as "Sparcent".

Divisions of Sparcent

① RSA

RSA fully stands for "Research and space atmospheric research".

- It collects information from Space through satellites and the data is either images or text and then this data is sended to Earth. This division main goal is to collect information of space and how space affect Earth.

- RSA division help in forecasting Pakistan's weather, checking ocean water rising rates, glacier melting and promote telecommunication i.e. TV, phone calls e.t.c.

Q. No. 5 (Page 2) سوال نمبر 5 (صفحہ 2)

2. E and SC

- E and SC stands for "Environmental and space center" division.

- This division see's and checks how space & it's phenoma affect environmental changes in farth i.e. weather, temperature e.t.c.

- This division help and tells farth what will or might happen in the prospective of "environment."

3. IR

- IR stands for "Ionospheric Reasearch".

- It studies about farth's atmosphere layer ionosphere which is high up the sky. IR division check how this layer of atmosphere affect farth.

- It helps in telecommunication & safelanding of ~~se~~ satellites or rockets.

4. SC

- SC stands for "Space Communication" division.

Q. No. 5 (Page 3) سوال نمبر 5 (صفحہ 3)

- It is a division that studies and help promote telecommunication ~~and~~ on Earth.

- It focuses on Space & Earth's ~~safe~~ connection i.e. collecting & recieving data safely.

- help forecast weather and Earth's phenominons.

The End