Q. No. 2 Part (i) **Plasma:** Plasma is the liquid part of human blood and is 55% of volume of blood. Its composition are: (i) سوال نمبر 2 جز

- Water - 90% by volume
- Protein - 7% - 8% by volume
- {Other organic an inoraulic substances} - 2% - 3% by volume.

The plasma protein have some important function in the circulation of blood.

- They make the bulk of the body.
- As plasma is liquid part, it is good for the transportation of cells to all body parts.
- It transport hormones to the place of its functioning parts.
- It transport uric acid in form urine and carbondioxide to excretion

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Q. No. 2 Part (ii) **Role of Lipids in Human Life:** (ii) سوال نمبر 2 جز

Fats such as ghee, butter, oil etc are collectively called as Lipids. Fats are present in form of large molecules (non diffuseable) which are broken down into small units with the help of enzymes. It is broken down into Fatty acid and Glycerole which diffuses in the cell easily. Once inside a cell it is further broken down to release energy. Lipids have some other functions such as:

- They gives energy to carry out other activities of the body.
- It is also used to make various structures of living cells.
- It gives material for growth and repair of the body.

Q. No. 2 Part (iii) Genetic Engineering: (iii) سوال نمبر 2 جز

The study of genes and inheritance is called genetics. Genetic engineering has made greate advancement in the field of human intrest ie Agriculture and Medicine. With the help of genetic engineering undesired part of genes is removed from an organism and certain desired characteristics are introduced in the genes of an organism. This result in production of new varaities in agriculture for example in life stock, Yield production. With help of genetic engineering life stock is being prepared which gives more flesh and milk and High varaties of yield is produced which is resistant to against diseases.

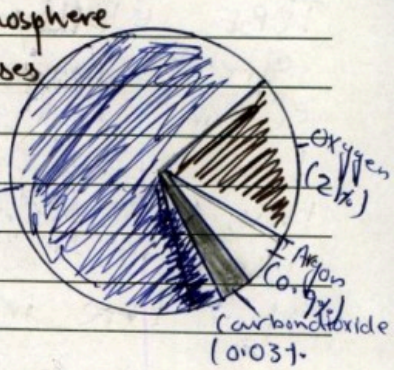
Q. No. 2 Part (iv) Basic Principle of First Aid. (iv) سوال نمبر 2 جز

There are three basic principles of first aid:

- Restoration of Airway.
- Restoration of Respiration.
- Restoration of Circulation.

Q. No. 2 Part (v) **Composition of Atmosphere:** (v) سوال نمبر 2 جز

- The Atmosphere consist of many gasesie Nitrogen (78%) and Oxygen (21%) these two gases forms the 90% of atmosphere by volume near Earth. Other gases are argon (0.9%) and Carbon-dioxide (0.03%).



- Other than these gases the atmosphere consist of many suspended liquid droplets and solid particles of dust.

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Q. No. 2 Part (vi) **Affects of Deforestration on the Environment:** (vi) سوال نمبر 2 جز

- Deforestration results in raising of temperature because of the cutting or burning of trees.

- Deforestration may result in flooding, as trees stops the flow of flooded water with the help of its strong roots. Its absence can result in flood. Frosion of land

- The land will become dry and the rate of precipitation will be effected

Q. No. 2 Part (vii) Role of Tube wells in Agriculture Mechanization: (vii) سوال نمبر 2 جز

TUBE WELLS: Altough pakistan has a great irrigation system in its agricultural sector but it is still disturbed by the less amount of rain. To deal with this problem tube wells are being used in agricultral sector of Pakistan for the irrigation of crops.

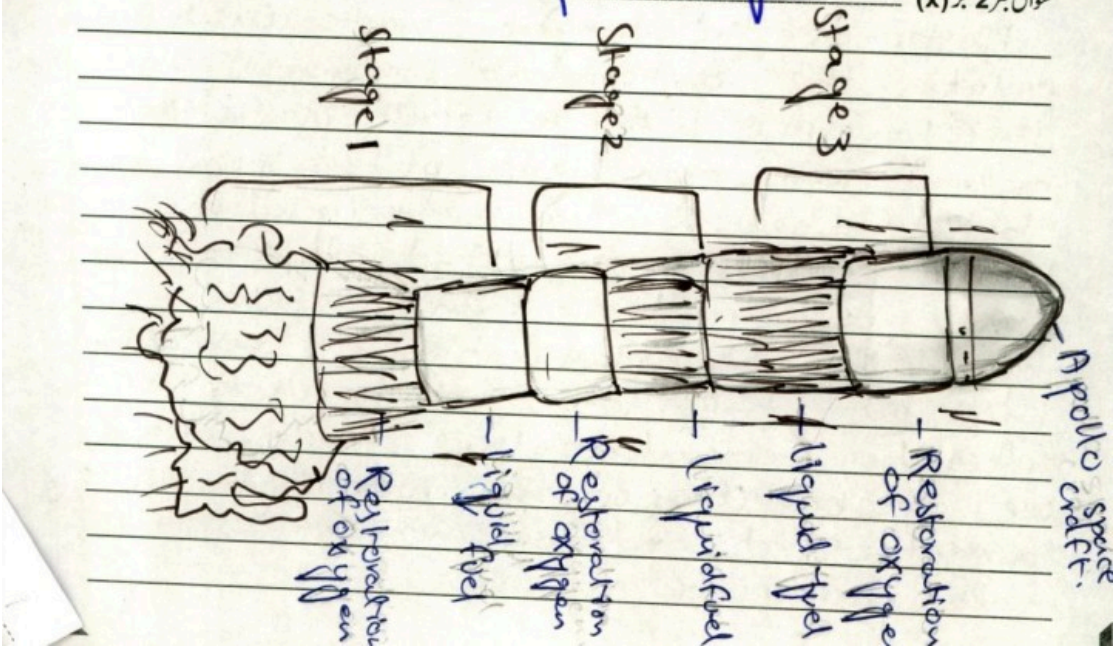
Q. No. 2 Part (viii) Difference between Ordinary light and laser light. (viii) سوال نمبر 2 جز

Ordinary Light	Laser Light
Ordinary light is formed natutally through the sun.	laser light is formed through laser or crystals such as ruby stone.
Ordinary light spreads in all direction.	laser light flows and pointed in one direction only.
Ordinary light is not that strong.	laser light is so strong that it can cut stone in pieces.

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

Holograph is the 3 demension (3D) representation of image. Laser light is used in making Holograph it shows 3 demension of a picture from one angle. Holograph is important in 3D photography and image production.

Q. No. 2 Part (x) A Pollo Space Craft: سوال نمبر 2 جز (x)



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

Ecosytem is the environment in which living organism and non living organism lives together. They are dependent on each other for various task. Humans are totally dependent on other organism for their food. Human are dependent on both animals and plants for their food. They eat animals meat, chicken, milk and other eatable products and also get to be dependent on plants for fruits. The animals are likewisely also dependent on plant for their food. This dependecy on eachother in an environment is ecosystem.

Q. No. 2 Part (xii) Recycling of Plastic: (xii) سوال نمبر 2 جز

Plastic are the dangerous waste which pollutes the environment dangerously so therefore it is better to recycle plastic than making them again. Plastic plates, spoons, bottels, bage etc can be recycled. The plastic products are cutted down in to small peices and are than carefully burned to make plastic sheets or remolding them into chairs, tables, bottels, cheap decorative items etc. By the recycling of plastic we are protecting our environment agdinst its harmful effects and also saving the cost of making new plastic materials.

(Section C)

Q. No. 3 (Page 1) سوال نمبر 3 (صفحہ 1)

Human Blood:

Human blood is very important for the functioning of the whole body. Human blood perform various functions and mainly circulation in the body and transporting cell. Human blood contains two main parts.

i) Liquid Part (Plasma 55% by volume)

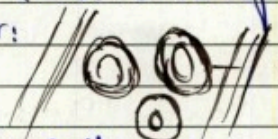
ii) Blood cell (45% by volume)

Human blood cells: Human blood contain three types of cells.

- Red Blood cells
- White Blood Cells
- Platelets.

Red Blood cell: Red blood cells are majorly present in the blood. Each cubic millimeter of blood contains about 5 million blood cell. Red blood cell contain haemoglobin which is the reason for red color of the Red blood cells. It is the property of haemoglobin that it attaches dissolved oxygen with it self. This oxygen is burnt to produce energy during respiration.

Q. No. 3 (Page 2) The average life of RBC (2 صفحہ) 3 سوال نمبر
is of 120 days. After completing its life of one twenty days the dead red blood cells are reformed in the red bone marrows, and breast or ribe bones. The amount of RBC are more in blood so that is why the blood looks Red in color:

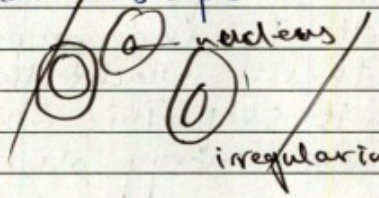


Red blood cells

White Blood Cell: Whit blood cell has a nucleus in the center. Each cubic millimeter blood contains up to 700 - 8000 WBC. White blood cells produces antibodies against diseases and give immunity against disease. It help us against diseas in two ways:

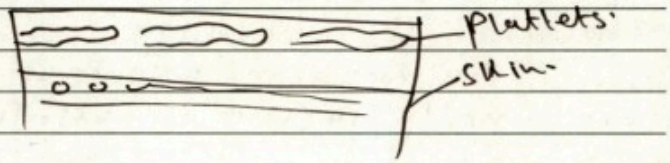
- It englof or destroy bacteria or viruses of a diseases.
- It kills the bacterias and produce antibodies to give immunity to the body. It also stops the grown of bacteria.

- White blood cell are also colorless. and irregular in shape.



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

Platelets: Platelets don't have any nucles and are catalysts of RBC and WBC. Platelets are helpful in coqulatio of blood in case of an injury.



Blood ~~Type~~ Groups: Human have four main Blood groups which are

=> A

=> B

=> AB

=> O

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

Vitamins:

Other than essential components the human body also need vitamins. which are essential for the growth and normal functioning of the body. Vitamin are vital for the body. There are divided in to two parts based on its solubility.

=) Some vitamins are soluble in Fat and are mostly present if fats. These vitamins are:

Vitamin A: Vitamin A is essential for the normal functioning of the body. It is important in the development of children. Its depicency in children may cause night blindness. They are available in milk, egg, meat, fish, carrot, cabbage, beetl, beans etc.

Vitamin D: Vitamin D is used in making bones strong. It provide phosphorous and calcium to the body. Vitamin D is synthesized by skin through sunlight. It is present in fruits, milk, egg, pulses, turnip, etc.

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

Vitamin E: Vitamin E is essential for the digestion of food in the body. (Its) It affects the functioning vitamin A and Vitamin C. They are present in form of, turnip, cabbage, pulses, pees, egg, milk, nuts. etc.

Vitamin K: Vitamin K is essential for the normal functioning of kidney. and it helps in stop bleeding during injury. Its deficiency may cause abnormalities in normal functioning of the kidney. Its defeciency will also cause diffidulty in stopping the bleed from wounds. It is helpful in coagulation of blood. It. defeciency can cause serious problem. It is present in tomatoes, pulses, vagetables, peep turnip, milk etc.

• There are 6 important vitamins from which 4 are Fat soluable and rest 2 (C and B) are water soluble.

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

Q. No. 5 (Page 1) Different Division of SPARCENT سوال نمبر 5 (صفحہ 1)

After realising the importance of Space exploration Pakistan has also discovered its owe space labotry. Its name as SUPARCO. SUPARCO stands for Spaae and Upper Atmospheric Research Comission. The comission has its research and testing labotry in Karachinear. Sonmaini.

Pakistan has there own Telecommunication Sattelite that provides clock communication all over the Pakistan. Badar I is first satellite that was launched 12, April 1969.

SUPARCO has its main lab named as SPARCENT for research and function. The SPARCENT has following division of center:

=) Remote Sensing and Applicatio Division:

This remote Sensing and application division captures Remotely controlled and Sensed information and imaging from space. These are help ful in finding deposition of land from satellite. It facilitys earth maping and imping.

=) Inospheric Research Division:

This division work on studying and understanding inosphere and different layer of Earth Atmosphere. It keeps working on the things taking place in inosphere layer.

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

=) Satellite Communication Division: This division workes on handling and functioning of communication satellite that haveit around earth and represented at fixed place from earth to communicate radio waves from earth to space.

=) Environmental and Space study/Science Division: This division works on acknowledging the function of environmental studies, Meterology, Pollution studies, Space science etc

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