Q. No. 2 Part (i) سوال نمبر 2 جز (i)

importance of plasma in blood Circulation:-

plasma makes us 55% of blood. its importance are as under:

1:- Transport:- it help to carries nutrient, hormones, vitamins and oxygen to body cells.

2. Waste removal:- it help to transport CO_2 and wast product from cell to kidney.

3.- Regulation:- it help to maintain blood pressure, body temprature etc.

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

Role of lipids in Human life:-

Lipids have many roles in human life some are as under:-

1. Energy storage:- 1g lipid gives 9kcal twice that of carbs! stored as a fat.
2. Cell membrane:- phospholipid form cell membrone
3. insulation:- subcutaneous fat prevents heat loss and protects organs.
4. Hormones:- ✠ some hormones are lipidy.

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

Role of Genetic Enginering in the field of Agriculture:-

Role of Genetic engineering in the field of agriculture are as under.

1. High yield crops:- Gm crops like BT Cotton give more production.
2. peste Resistance:- Genes from bacteria aded to plant to kill insects.
3. Drought Resistance:-
4. improved nutritients.-

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

Principle of first Aid:-

The three main principles of first Aid are as under:-

1. preserve life:- Check ABC - Airway, Breathing, circulation. Give CPR if needed.
2. Prevent worsening:- Stop bleeding, immobilize fractures and prevent infection.
3. Promote Recovery:- Reasure patient keep warm, shift to hospital quickly.

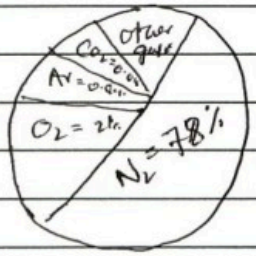
Q. No. 2 Part (v) سوال نمبر 2 جز (v)

Composition of Atmosphere:-

Atmosphere consist of following elements.

1. Nitrogen N_2 = 78%
2. Oxygen O_2 = 21%
3. Argon Ar = 0.9%
4. Carbondioxide CO_2 = 0.04%
5. Other gases = 0.06%

Pic Chart:-



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

Effect of deforestation in environment:-

Deforstations have many effects in atmosphere.

1. Climate chang:- less CO_2 absorbed and increase Global warming.
2. Soil Erosion:- Tree roots bind soil. No trees, flood and land becomes barren.
3. Loss of biodiversity:- Animal and plant loos habital many species extinct-
4. less rainfall

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

Role of Tube well in Agriculture:-

Tube well have many Role in agriculture.

1. Irrigation:- Tube well provide water to crops in areas with no canals. espacialy in punjab and sindh.
2. Double Cropping:- farmer can grow 2-3 crops per year instead of depending on rain.
3. Reclaims land:- lowers water table in waterlogged areas, making land usable.

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

Deffrentiate b/w Less and ordinary Light:-

Ordinary Light	Lasser Light
→ it has many wavelenths / colours	→ it is mono-chromatic.
→ spread in all direction	→ Highly directional narrow beam.
→ waves are out of phase	→ waves are in same phase.

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

Halograph:-

A 3D photograph made using lasser light that shows the object from deffrent angles called the Hallo-graph.

Uses:-

- it is used for security.
- it is also use for madical images.
- it used in Arts and museum.
- it help to Data storage.

Q. No. 2 Part (x) سوال نمبر 2 جز (x)

Space Craft:-

Space craft have three parts.

1. Command module:- it is cone shaped, wher astronauts sit.
2. Service modula:- cylinder with engine and oxygen tanks.
3. lunar modulla:- legs for moon landing.

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

Importance of textile sector in the economy of pakistan:-

Textile sector have many importance in economy of pakistan.

1. Exports:- 60% of pakistans total exports are textile and earn foreign exchange.
2. Employment:- Textile sector provid jobs to 40% of industrial labor, especially womens.
3. GDP :- it contribut 8.5% of GDP.

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

Plastic Recycling:-

Plastic recycling means reprocessing waste plastic into new products.

Steps:-	Benefits
→ Collection	→ it help to reduce pollution
→ Sorting	→ it saves oil
→ washing	→ landfill wast and creat jobs.
→ melting	
→ making palates.	

Example:- PET bottled recycled into polyster fyber.

(Section C)

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

Humman Blood Cells:-

Bloods have two main parts: plasma 55% and blood cells 45%.
Blood cells are of three types.

1. Red Blood Cells (RBC):-

Red blood cell are one part of blood cell.

Shape:- Red blood cells are biconcave disc, no nucleus in mature RBC. Its length is 7.8 μm.

Number:- It consist 5-5.5 million per mm^3 in males, 4-4.5 millions in female.

Life span:- Its life spain is 120 days. It is made in bone marrow, destroyed in liver and spleen.

Functions:- It contain haemoglobin which carries O_2 from lung to tissues and CO_2 from tissues to lungs. 1 RBC has 250 million haemoglobin molecules.

Desease:- Due to less RBC desease may anaemia while more RBC Desease is polycythemia.

2. White Blood Cells (WBC):-

WBC are also called leukocytes.

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

Shape:- It shape is irregular and have nucleus. It is larger than RBC.

Number:- 4000 - 11000 per mm^3. Its life is 7-14 days.

Types:- WBC have two most important types.

a) Granulocytes:- Neutrophils 62% kill bactaria, Eosinophils 2-3% kill prasites, Basophils 0-4% cause inflammation.

b) Agranolucytes:- lymphocyte 30% make antibodies. monocytes 5-7% eat dead cells.

Function of WBC:-

→ It is called Body soldier. It fight infection, make antibodies and eat germs by phagocytes.

3- platelets / Thrombocytes:-

Shape:-

It is small fragments of cell and no nuclus.

Number:- 150,000 - 400,000 per mm^3 its life is 7-8 days.

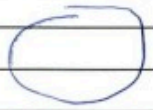
Function:-

→ It help in blood clotting. When vassel cuts, platelets help to clotting.

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

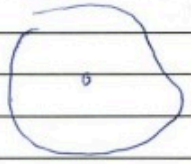
Diagram:-

(1) RBC



→ Biconcave
No Nucleus
Carries O_2

(2) WBC



→ Nucleus present
→ Fight infection

(3) Platlets

→ Small fragment.
→ Help clotting.

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

Natural and mineral Resourcess of pakistan:-

pakistan is rich in natural resources. four important Resourcess are as under:

1. Natural Gas
2. Coal
3. Copper and Gold
4. Gypsum

1. Natural Gas:-

Natural gas are one of mineral resource in pakistan.

→ **Location:-**

most natural gas are present in Sui blochistan discovered in 1052.

→ **Reserves:-**

pakistan has 825 billion cubic meter Reserves of Natural gas.

→ **Uses:-**

-> 50% of pakistan's energy needs, it is uses in houses for cooking, in factorize, fertilizer industry, CNG for vehicles.

→ **importance:-**

Sui gase save billions in oil imports. major cities connected by pipline network.

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

2. Coal:-

Coal is secound natural resource of pakistan.

→ **Location:-**

Thar sindh has 175 billion tons - 5th largest in world. coal are also in lakhra, sonda and Quetta.

→ **Quality:-**

in pakistan lignit to sub-bitumminus, low to medium quality of coal are presented.

→ **Uses:-**

it is used for power genration, brick kilns, and cement industry.

→ **Importance:-**

Thar coal can produce 100,000 MW for 200 years.

3. Copper And Gold:-

Copper and Gold are also the mineras of in pakistan.

→ **location:-**

these are mostly present in Reko Diq Blochistan and Saindak.

→ **Reserves:-**

Reko Diq has 5.9 billion tons ore with 0.41% copper and 0.29g/t

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

ton gold.

Uses:-

→ Copper used in electric wires.

→ Gold used in Jewelery and reserves.

→ Importance:-

Through this we can earn $2 billion dollar per year for 50 years. If developed properly.

4. Gypsum:-

Gypsum are also the minral resource of pakistan.

Location:-

Loc Gypsum are in D.G Khan, Kohat and Padu.

Reserves:-

350 million tons, pakistan is 6th largest producer.

Uses:-

It is used in:- Cement industry, fertilizer, plaster of paris and paints.

Importance:-

It exported to india, Bangladesh and support construction industry.

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

Magnatic Resonance Imag (MRI):-

MRI is a madical imaging tehnique to see inside the human body without using x-ray or surgery.

Principal:-

MRI works on the principle of Nuclear magnatic Resonance. Human body contain 70% water, so lots of hydrogen atoms. Hydrogen nuclei act like tiny maignat.

In MRI mashine.

→ strong magnatic field 1.5-3 Tesla makes all hydrogen nuclei align in one direction.

→ Radio waves are sent. Thay knock hydrogen nuclei out of alignments.

→ When radio wave stop, nuclei return to alligment and release energy.

→ Computer detect this energy and makes detailed image.

Parts of MRI mashine:-

MRI mashin consistem following parts.

1) magnet
2) Gradient coil
3) RF coils
4) computer.

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

Procedure:-

patient lies on table that slides into tube-shaped magnet. must remove all metals. Test takes 30-60 minutes. patient must stay still. machine makes loud knocking sounds. Sometimes contrast dye injected for clear image.

Advantage over x-ray/CT:

- it has no radiation so it is best for pregnant women and children.
- it has soft tissue detail, best for brain spinal cord, joints and tumors.
- it has multi plan, can take image from any angle.

DisAdvantages:-

- It is very expensive.
- it is time taking process.
- its not for metal implants.
- it cause claustrophobia.

uses:-

Diognus brain tumors, spinal disc slip, torn ligaments, stroke, multiple sectolosis and cancer stagging.

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