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Subject Physiology I

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Dept:- B.S RADIOLOGY.

Q=1 Ans:- "Part A"

Ans:- 1 The major level of organization in the body form the simplest to the most complex are:-
1) Chemical 2) cellular 3) Tissue 4) organ 5) organ System 6) organism.

1:- Chemical:-
Atoms and molecules.- atoms such as nitrogen oxygen and calcium. Atoms combine to form molecule such as proteins. Carbohydrates, fats & vitamins.

2:- Cellular:-
↑Molecule combine to form cell. Cells are the basic structural and functional unit of an organisms
Example:- muscle cells, nerve cells & Blood cells.

3:- Tissue:-
Tissue are made up of groups of cells and the material surrounding the cells. They work together to perform specific function. There are four types of tissue in the human body.

1:- Epithelial tissue
2:- Muscle tissue
3:- Connective tissue
4:- Supporting Connective tissue

4):- Organ:-
Tissue Combine to form the organ structural level of the human body. Organs are composed of two or more different types of tissue. Each organ has specific function and recognizable shape.
Example - Lungs, heart brain, liver

5:- System:-
A System is made up of several organs that have a common function, for example. the organs that are part of the digestive system break down and absorb food. Some organs can be part of more than one system.
For example
The pancreas is the part of digestive system and also the endocrine system.

6:- Organism:-
The largest structural level is the organism level- all the parts which make up the body and function with each other form the total organisms.

(Part B)

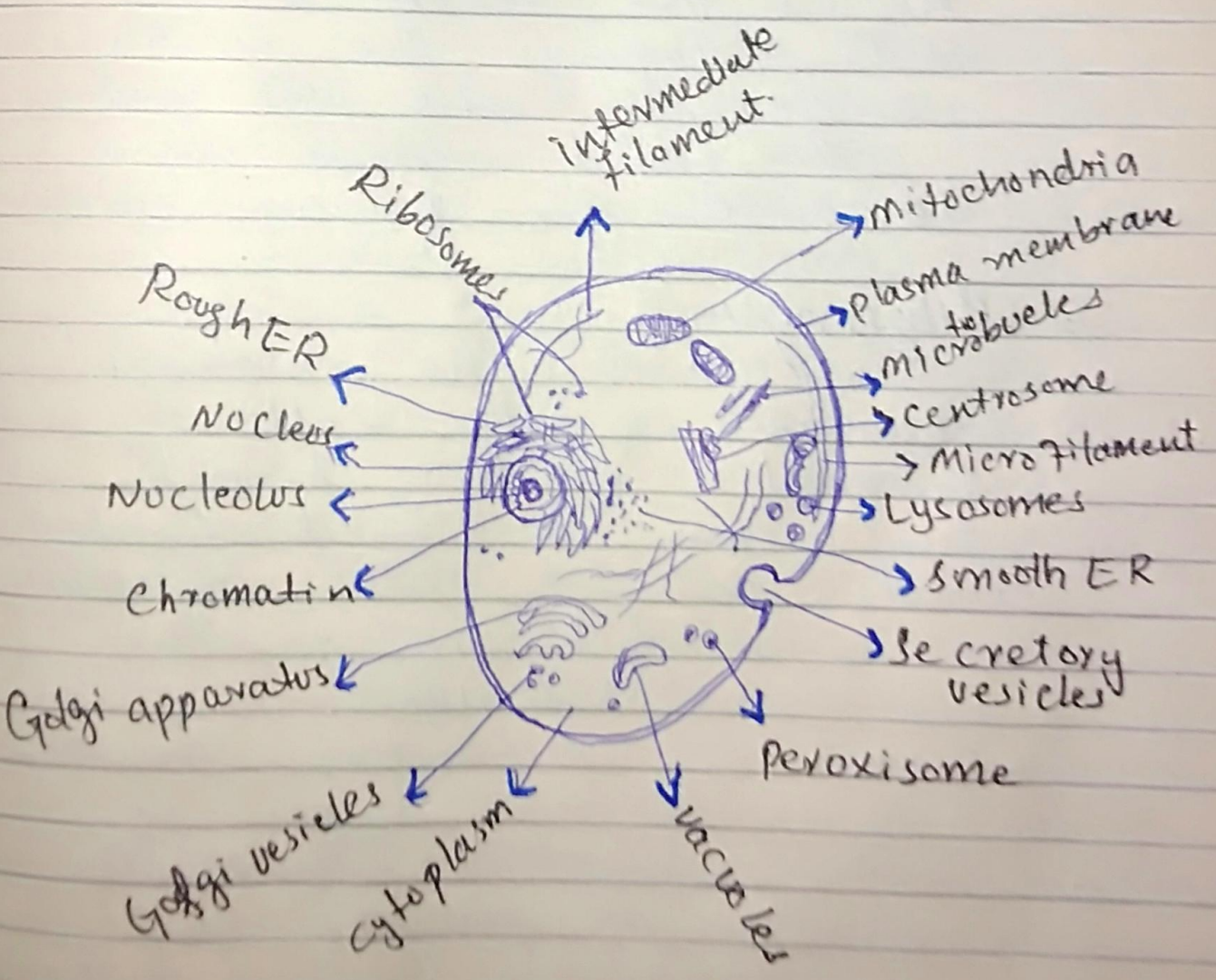
1:- Positive feedback:-
occures to increase the change or output. The result of a reaction is amplified to make it occur more quickly.

2:- Negative feedback:-
occurs to reduces the change or output. The result of a reaction is reduced to bring the system back to a stable state.

Q:2 Ans:.

(Part A)

2 Ans:- In cell biology an organelle is a specialized subunit usually with in a cells that has a specific function. The name organelle come from the idea that these structure are parts of cells, as organs are to the body - hence organelles, the suffix -elle being a diminutive.



(Part B)

1:- Nucleus:-

known as the cell Command center. The nucleus is a large organelle that stores the cell's DNA. The nucleus controls all of the cells activities such as growth & metabolism using the DNA's genetic information with in the nucleus A smaller structure called the nucleolus which houses the RNA. RNA helps convey the DNA's order to the rest of the cells and serve as a template for protein Synthesis

2:- Ribosomes:-

are the proteins factories of the cells. Composed of two subunit they can be found floating freely in the cells. Cytoplasm or embedded with in the endoplasmic Reticulum: using the templates and instructions provided by two different types of RNA ribosomes synthesize a variety of protein that are essential to survival of the cells

3:- Endoplasmic Reticulum:-

The ER is a membranous organelles that share parts of its membrane with that of the nucleus. Some portion of the ER knows as the Rough ER ~~and~~ are studded with ribosomes and are involved with protein manufacturer - The rest of the organells is refered to as the Smooth ER and serves to products vital lipids (Fats)

4:- Golgi apparatus:-

97 the protein from the rough ER. require further modification - They are transported to the golgi apparatus is Composed of folded membranes - It Searches the proteins amino acid Sequences for specialized "Codes" and modifies them accordingly - These processed proteins are stored in the golgi ~~them~~ or packed in the vesicles to be shipped else where in the cells.

Q=3 Ans.

Ans:- 3

Digestion:-

The process by which food is broken down into simple chemical compounds that can be absorbed and used as nutrients or elimented by the body is called digestion.

The processes of digestion include six activities:- ingestion, propulsion, melhanical or physical digestion chemical digestion, absorption & defecation.

1:- Ingestion:-

↳ The entry of food into the elimentary canal through the mouth is called ingestion. Simply put the act of eating and drinking is called ingestion.

2:- Propulsion:-

↳ Propulsion refers to the movement of food through the digestive tract.

↳ It includes both the voluntary process of swallowing and the involuntary process of peristalsis.

↳ Peristalsis consists of sequential alternating waves of contraction and relaxation of alimentary wall smooth muscles which act to propel food along.

3:- Mechanical digestion:-

↳ Digestion is a purely physical process that does not change the chemical nature of the food

↳ Instead it makes the food smaller to increase both surface area and mobility.

4:- Chemical digestion:-

↳ Chemical digestion of food by enzymes presents in secretion produced by glands and accessory organs of the digestive system.

↳ In chemical digestion starting in the mouth digestive secretion breakdown complex food molecules into theire chemical building blocks (for example proteins into seperates amino acid)

5:- Absorption:-

↳ This is the process by which digested food substances pass through the walls of some organs of the elimentary canal into the blood & lymph capillaries for circulation around the body.

↳ It takes place primirily within the small intestine.

6:- Elimination:-

↳ Food substance that have been eaten but cannot be digested and absorbed are excreted by the bowel as feces.

The End.