

**Parvatibai Chowgule College of Arts and Science (Autonomous)**  
**Post Graduate Diploma in Clinical Genetics & Medical Laboratory**  
**Techniques (PGDCG&MLT)**  
**February 2022 Semester I End Examination**

Semester: **I**

Max. Marks: **30 Marks**

Course Title: **Clinical Biochemistry I**

Course Code: **PGD-CGMLT-C2**

Duration: **2 Hours**

**Q.I. Answer ANY FIVE the following (10)**

1. Differentiate between respiratory alkalosis and metabolic alkalosis.
2. State any four characteristics of protein denaturation.
3. What is enzyme inhibition? List the various types of enzyme inhibition.
4. Define the term “pH”. Write a short note on the pH scale.
5. What are lipids? State the biomedical importance of lipids.
6. State the sources and daily requirements of chlorine.

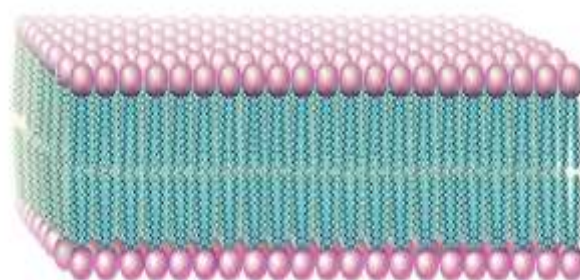
**Q. II. Answer ANY TWO of the following (10)**

1. Explain the respiratory regulation of pH in the body.
2. Write a note on the tertiary and quaternary structures of proteins.
3. Give a detailed account on vitamin A.

**Q. III. Answer ANY TWO of the following (10)**

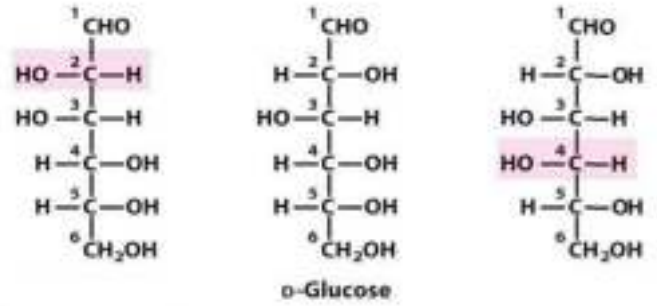
1. The image on the right depicts an important structure present in eukaryotic cells. Study the image carefully and answer the following questions.

Identify the structure depicted in the diagram. Write a note on its composition. In addition, state the function of the structure depicted in the diagram.



**P.T.O**

2. The image on the right depicts an important property exhibited by carbohydrates. Study the structures carefully and answer the following questions.



What are carbohydrates? Write a short

note on the classification of carbohydrates. Identify and describe the property depicted in the picture. Furthermore, name the structures located on either side of D-Glucose.

3. Consider the following hypothetical scenario and answer the subsequent questions:

“A patient approaches a doctor with the following symptoms: puffiness in the face, lethargy, and muscle spasms. Looking at the patient’s medical history, it is evident that she has a long-term use of a corticosteroid drug.”

Based on the patient’s medical history, identify, and write a short note the disorder that the patient is suffering from. Identify the specific mineral that the disorder is linked to. In addition, write a note on the sources, excretion, and regulation of the mineral you have identified.

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