

SCHOOL OF UNANI MEDICAL EDUCATION AND RESEARCH**M.D (Moalajat) I Year Annual Examination 2022****Paper No. MDM 101****Keemiyae Hayati wa Virasiyat (Biochemistry and Genetics)**

Time: 3 Hours

Max. Marks: 75

*Note Attempt all the questions. All parts of a question must be attempted in continuation***SECTION – A****(2X10=20 Marks)****Answer in brief (up to 20 words):**

- Provide a definition and classification of carbohydrates.
- Explain why monosaccharides are considered reducing sugars.
- Define hypervitaminosis and describe its pitfall.
- What is a coupled enzyme assay?
- Provide examples of polar and aromatic amino acids
- What do you mean by Genetic Code?
- Differentiate between nucleoside and nucleotide.
- What is Chargaff's Rule?
- Role of DNA Polymerase vs RNA Polymerase.
- Which enzyme is deficient in Von Gierke and McArdle's disease

SECTION-B (25Marks)**Attempt any FIVE questions (Maximum 100 words for each)****(5 x 5=25 Marks)**

- Choose one clinically important enzyme and describe its role in the body.
- Briefly discuss the role of lipids in the cell membrane and how they regulate fluidity.
- What are the advantages of DNA based diagnosis? Discuss the most commonly used technique for DNA based diagnosis in the medical lab.
- What do you understand by gene mutations? Give some examples.
- Name some X-linked disorders. Write briefly about abnormalities and important chromosomal disorder.
- What are glycogen storage diseases? Give two examples.
- Briefly discuss about Hershey and Chase experiment to prove that DNA is the hereditary material.
- What is the energy currency of the cell? How is it generated?

SECTION-C (30Marks)**Attempt any THREE questions (Maximum 300 words for each)****(10x3 = 30 Marks)**

- What is gene therapy and what are its goals? Discuss the types of gene therapy.
- Describe the steps involved in glycolysis and its pathway.
- Discuss enzyme classes with examples.
- Discuss in detail about aneuploidy and its types. Give examples.
- What is DNA replication? Discuss the process highlighting all the enzymes involved.
