

Moalajat

Roll No.....

M.D. (Moalajat) 1st YEAR ANNUAL EXAMINATION 2017

MDM-101

**Keemya Hayati wa Virasiyat
(Biochemistry and Genetics)**

Time: Three Hours

Maximum Marks: 75

(Write Roll No. at the top immediately on receipt of this question paper)

Attempt all questions. All parts of a question must be attempted in continuation.

SECTION-A (10 x 2 = 20 marks)

Attempt all (Maximum 20 words for each)

Q.1. Answer in brief.

- (a) Name two sulphur containing amino acids.
- (b) State the Lambert Beer Law.
- (c) What is a Trisomy ? Give two examples.
- (d) Define Okazaki fragments.
- (e) Name three vitamins that function as co-enzymes.
- (f) State two differences between ICF and ECF.
- (g) Name two enzymes important for Liver function test.
- (h) What is semi conservative replication ?
- (i) What is DNA based diagnostic probe ? Cite an example.
- (j) Name two autosomal chromosomal abnormalities.

SECTION-B (5 x 5 = 25 Marks)

Attempt any FIVE (Maximum 100 words for each)

- Q.2. What are the major features of a DNA-double helix ?
- Q.3. Differentiate between Aneuploidy and Euploidy ? Give two examples each.
- Q.4. State the characteristics of enzymes that differentiate them from inorganic catalysts.
- Q.5. What are the various requirements for a DNA replication ?
- Q.6. Write down the glycolytic pathway with emphasis on generation or utilization of energy current.
- Q.7. Discuss Hershey and Chase experiment.

SECTION-C (3 x 10 = 30 Marks)

Attempt any THREE (Maximum 300 words for each)

- Q.8. Differentiate between mRNA, rRNA and tRNA ? Draw well labelled diagrams.
- Q.9. Name the six main classes of enzymes. What is Direct, Indirect and coupled enzyme assay ?
Discuss any two methods of enzyme assay.
- Q.10. Discuss on example each of inborn errors of Carbohydrate, protein and Lipid Metabolism.
- Q.11. What are Glucogenic and Ketogenic amino acids ? Give example. Depict the urea cycle.
- Q.12. What are essential fatty acids ? Discuss Lipid profile.
- Q.13. Discuss the four major types of chromosomal aberrations.
