

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.
