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Your Roll No.....

M.D (MOALAJAT) I YEAR ANNUAL EXAMINATION, 2016

Paper-MDM-101

Keemiyae 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 question must be attempted in continuation*

Section – A (2 x 10 = 20 Marks)

Answer in brief (up to 20 words);

- (a) Define Gene.
- (b) What are silent mutations ?
- (c) Give two example each of Monosaccharides, Disaccharides and Polysaccharides.
- (d) Name any four essential amino acids.
- (e) Name the bases found in DNA and RNA. Which of these bases is never found in DNA ?
- (f) Differentiate between a Nucleoside and a Nucleotide ?
- (g) Which bond links amino acids in a peptide ? Show its structure.
- (h) State some important functions of lipids.
- (i) What is meant by 'Degeneracy of Genetic code'.
- (j) Can RNA act as a genetic material ? Justify.

Section – B (5 x 5 = 25 Marks)

Attempt any FIVE

Answer in upto 100 words;

- (a) Write a note on characteristics and major classes of Enzymes.
- (b) What are proteins ? Explain the different levels of structure of proteins.
- (c) Give a brief account of Genetic disorders.
- (d) Discuss any two disorders associated with metabolism.
- (e) Write a note on Mendelian laws of inheritance.
- (f) Write a note on Pharmacogenetics.

Section – C (3 x 10 = 30 Marks)

Attempt any THREE

Answer in upto 300 words;

- (a) Write a detailed note on Fat-soluble vitamins.
- (b) Describe the structure of chromosome.
- (c) Name five mineral that are required in significantly large amounts in the diet. Discuss their sources, functions and deficiencies.
- (d) Describe the structure of RNA. Discuss the different types of RNA and their functions.
- (e) Describe different causes and types of mutations.
- (f) Show the reactions of Glycolysis with formulae and enzymes.