

- Q.2 Answer any SEVEN from the following: (14)**
- i. Write applications of pulse field gel electrophoresis.
 - ii. Differentiate between Physical markers and Genetic markers.
 - iii. Describe the causes of Royal disease.
 - iv. What is BMI?
 - v. Classify disorders of inborn error of metabolism.
 - vi. What are mucopolysaccharidosis?
 - vii. Name human Mitochondrial syndromes.
 - viii. Define: Ecogenetics and Pharmacogenomics.
 - ix. Write significance of DNA testing.
- Q.3 (a) Enlist physical makers used for mapping. Explain clone map in detail. (06)**
(b) Write a detail note on Chromosome walking. (06)
- OR**
- (b) Explain any two positional independent strategies used for mapping human disease gene. (06)**
- Q.4 (a) Write a note on Oncogenes. (06)**
(b) Describe in detail genetic basis of Huntington's disease. (06)
- OR**
- (b) Write a notes on the following:**
 (i) Neurofibromatosis (ii) Genes associated with IDDM and NIDDM **(3+3)**
- Q.5 (a) Describe the causes, symptoms and mechanism of Maple syrup urine disease. (06)**
(b) Describe genetic aspects of PKU and Pome disease. (06)
- OR**
- (b) Give an overview of sphingolipidosis. (06)**
- Q.6 (a) Enlist the techniques used for detection of known mutation. Explain any 2 of them in detail. (06)**
(b) Describe ethical issues in medical genetics. (06)
- OR**
- (b) (i) Write a note on Conjugation reaction (03)**
(ii) Enlist techniques for the scanning of genes for unknown mutations. (03)