

This question paper contains **3** printed pages]

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

S. No. of Question Paper : **7880**

Unique Paper Code : **2493010017**

Name of the Paper : **Molecular Diagnostics**

Name of the Course : **B.Sc. (Hons.) Biochemistry (NEP)**

Semester : **VIII**

Duration : **2 Hours**

Maximum Marks : **60**

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

There are **6** questions.

Attempt 4 questions in all. *All* questions carry equal marks.

Question No. **1** is compulsory.

1. (a) Explain the following terms :

- (i) Risk Markers
- (ii) Acute graft rejection
- (iii) Autograft
- (iv) Aneuploidy
- (v) Prognosis
- (vi) PPE
- (vii) Karyotyping.

(b) Name a molecular marker for Diabetes.

14,1

P.T.O.

2. (a) Explain the Good Lab Practices to handle biomedical waste.
- (b) Explain the risk factors that would mandate a BSL-3 and BSL-4 lab facility.
- (c) Explain the molecular methods used in the diagnosis of the following diseases :
- (i) Dengue
- (ii) COVID-19. 5,5,5
3. Give important molecular markers for the following diseases and their importance :
- (a) Cardiac markers
- (b) Inflammation markers
- (c) Tumor markers
- (d) Hypertension. 4,4,4,3
4. (a) Give the different sources of stem cells for stem cells transplantation.
- (b) Differentiate between MHC class I and MHC class II antigens.
- (c) Briefly explain the significance of HLA typing in organ transplantation.

5. (a) What is the Pre-conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act ? Why was it formulated ?
- (b) Explain the prenatal maternal serum triple test and its significance in the diagnosis of Down syndrome.
- (c) What are the various indications for prenatal testing ? 5,5,5
6. Explain the role of the following Techniques in Diagnostics :
- (a) FISH
- (b) PCR
- (c) RELP
- (d) SNP
- (e) NGS. 3×5=15

