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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**FOURTH SEMESTER M.Sc. (MEDICAL BIOCHEMISTRY)**  
**DEGREE EXAMINATION – JULY 2021**

**SUBJECT: MOLECULAR BIOLOGY AND GENETICS (MBC 702)**

Monday, July 12, 2021

Time: 10:00 – 12:30 Hrs.

Maximum Marks: 50

**Answer all the questions.**

**Long Answer Questions.**

1. Explain the synthesis of purine nucleotides.

(10 marks)

2. Explain any two DNA repair mechanisms with one associated disorder each.

(10 marks)

**Short answer questions:**

3A. Diagnostic tests in HIV infection.

3B. Explain regulation of lac operon.

3C. Classify tumor markers with examples.

3D. Explain principle and application of southern blotting.

3E. Explain tumor suppressor genes with two examples.

3F. Human genome project.

(5 marks × 6 = 30 marks)

