



RAN - 2003000204020071

**RAN-2003000204020071 / 2003000204030071**

**S. Y. B. Sc. (MLT) (Sem. - IV) Examination October - 2023**

**Microbial Metabolism and Genetics : Paper - MLT 08**

**Set - II**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**सूचना : / Instructions**

(1)

नीचे दृशविवेक निशानीवाणी विगतो उत्तरवली पर अवश्य लपववी.

Fill up strictly the details of signs on your answer book

Name of the Examination:

S. Y. B. Sc. (MLT) (Sem. - IV)

Name of the Subject :

Microbial Metabolism and Genetics : Paper - MLT 08 - Set - II

Subject Code No.: 2003000204020071 / 2003000204030071

Seat No.:

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Student's Signature

- (2) Figures to the right indicate the full marks of the questions.  
(3) Draw the figures wherever necessary.

**Q. 1. Answer in brief :**

**(08)**

- (a) Elaborate ETC. Which component in ETC accept only one electron?  
(b) Define anabolism.  
(c) State the function of helicase and topoisomerase during replication of DNA.  
(d) What is insertion sequence?

**Q. 2. Comment or Justify on any two of the following : (Any 2)**

**(12)**

- (a) Genetic code is a triplet code.  
(b) F factor plays an essential role during conjugation.  
(c) Microorganisms are classified based on their energy, carbon and electron requirements.

**Q. 3. Answer the following in : (Any 2) (16)**

- (a) Explain the methods to microorganisms employs to regulate the metabolism.
- (b) Define photosynthesis and give a brief explanation of oxygenic photosynthesis.
- (c) Explain in detail initiation and activation of Protein synthesis.

**Q. 4. Write in notes on the following : (Any 2) (14)**

- (a) Fermentation.
  - (b) Transposable elements.
  - (c) Specialised transduction.
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