



RAN - 2103000206030061

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**T. Y. B. Sc. (Sem. - VI) Examination September - 2023**

**Microbiology : Paper - GE-3**

**Analytical Instrumentation and Techniques (New)**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**सूचना : / Instructions**

(1)

नीचे दशावलि निशानीवाणी विगतो उत्तरवली पर अवश्य लभवी.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:

**T. Y. B. Sc. (Sem. - VI)**

Name of the Subject :

**Microbiology : Paper - GE-3 - Analytical Instrumentation and Techniques (New)**

Subject Code No.: **2103000206030061**

Seat No.:

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Student's Signature
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- (2) Figures to the right indicate full marks of the question.  
(3) Draw neat and labelled diagrams whenever necessary.

**Q. 1. Give Specific answers :**

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- State the importance of signal to noise ratio.
- State the principle of the pH meter.
- Enlist the support media used in Electrophoresis.
- What are Radioisotopes ? Give examples.
- Define:
  - Atomic structure
  - Radiation
- State advantages and Disadvantages of Photometers.

**Q. 2. Explain/comment on any two of the following:**

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- Southern Blot technique is a significant analytical laboratory technique.
- Performance parameters play important role in analysis.
- Autoradiography is an important analytical technique.

- Q. 3. Discuss any two of the following. 16**
- a. Enlist instrument calibration techniques. Explain any two in detail.
  - b. Discuss various parts of a Flame photometer.
  - c. Elaborate : PCR components and Protocol.
- Q. 4. Write short notes on any two of the following. 10**
- a. Elements of Analytical instruments.
  - b. Centrifuge: Principle and working.
  - c. Use and safety of Radioisotopes.
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