

RAN-2103000206030061

B.Sc. (Microbiology) (Semester-VI) Examination March - 2026
GE-3 : Analytical Instrumentation and Techniques (Old)

[Total Marks: 50

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવર્ણી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book. (2) Figures to the right indicate full marks. (3) Draw neat and labelled diagrams wherever necessary.	Seat No.: <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> </table> Student's Signature						

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|-------------|--|-----------|
| Q-1. | Give Specific answers :- | 08 |
| | <ol style="list-style-type: none"> 1) What do you mean by calibration? 2) Mention any two elements of analytical instruments. 3) Enlist any two disadvantages of photometer. 4) Mention function of flame photometer. 5) Expand the term: PAGE. 6) Define: Electrophoresis. 7) Enlist any two safety aspects of radioisotopes. 8) What do you mean by nuclear force? | |
| Q-2. | Explain any two of the following :- | 14 |
| | <ol style="list-style-type: none"> 1) Explain accuracy and precision of analytical instruments. 2) Describe specifications of spectrophotometer. 3) Discuss components and applications of PCR. | |
| Q-3. | Explain any two of the following :- | 14 |
| | <ol style="list-style-type: none"> 1) Explain use of radioisotopes in biological specimens. 2) Discuss any two calibration techniques in detail. 3) Explain principle, care and maintenance of centrifuge. | |
| Q-4. | Write a short note on: (any two) | 14 |
| | <ol style="list-style-type: none"> 1) Northern blot technique and its application. 2) Practical techniques of autoradiography. 3) Errors in chemical analysis. | |