RAN-2103000206020175

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B. Sc. Environmental Science - XXI (Sem. - VI) Examination April - 2023

ENV - 605 : Environmental Biotechnology

Time: 2 Hours] **[Total Marks: 50**

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of ☛ signs on your answer book

Name of the Examination:

☛ **B. Sc. Environmental Science - XXI (Sem. - VI)**

Name of the Subject :

☛ **ENV - 605 : Environmental Biotechnology**

Subject Code No.: **2103000206020175**

Seat No.:

Student's Signature

(2) Figures to the right indicate full marks.

(3) Draw neat and labeled diagrams wherever necessary.

Que. 1. Give specific answer of <u>any six</u> of the following: **[12]**

1. Write two techniques of *Ex situ* bioremediation process.
2. What is stringent and relaxed plasmid?
3. Give two examples of bioplastic.
4. What is phycoremediation? Write importance of phycoremediation.
5. Give two examples of fungi involved in heavy metal removal from waste water.
6. State role of Tris in plasmid DNA isolation process.

Que. 2. Comment on / Justify <u>any two</u> of the following: **[12]**

1. Bioleaching is an environment friendly process - Justify.
2. Explain principle and example of bioaffinity biosensor.
3. Oilzapper Technology - Comment.

Que. 3. Attempt any two of the following: **[16]**

1. Discuss: Classification of plsamid.
2. Define biodegradation. Explain microbial basis of biodegradation.
3. Enlist various cell biological methods for pollutant detection. Explain any two of them in detail.

Que. 4. Write short notes on any two of the following: **[10]**

1. Advantages and Disadvantages of Phytoremediation.
2. pBR322.
3. Applications of environmental nanotechnology.

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