



RAN - 2103000206020172

**RAN-2103000206020172**

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

**Instrumentation Techniques in Environmental Analysis**

**ENV - 602 - Env. Sci. - XVIII**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**સૂચના : / Instructions**

(૧)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.

Fill up strictly the details of signs on your answer book

Name of the Examination:

T.Y. (Env. Sci.) B.Sc. (Sem. VI)

Name of the Subject :

Instrumentation Techniques in Environmental Analysis  
ENV - 602 - Env. Sci. - XVIII

Subject Code No.: 2103000206020172

Seat No.:

--	--	--	--	--	--

Student's Signature

- (2) Figures to the right indicate full marks of the question.  
(3) Draw neat and labeled diagrams whenever necessary.

**Q.1. Give Specific Answers.**

**12**

1. Write down the names of reversible electrodes.
2. What is ion selective electrodes?
3. Define: specific conductance and equivalent conductance.
4. What is atomization? Where it is carried out?
5. Write down the types of columns used in GC.
6. Why HPLC is superior to GLC?

**Q.2. Comment on/explain any two of the following:**

**12**

1. Explain colorimeter in detail. Draw schematic setup.
2. Write down names of commercially available GC detectors and their applications.
3. Discuss: applications of gas liquid chromatography.

**Q.3. Comment on/explain any two of the following: 16**

1. Draw block diagram of flame photometer and working of each component.
2. Describe about hollow cathode lamp used in AAS in detail.
3. Draw labelled diagram of GC and discuss principle of GC separation.

**Q.4. Write Short Notes (Any Two) 10**

1. Applications of conductometry.
  2. Components of HPLC and working of it.
  3. Principle of ion exchange chromatography.
-