

IN801M - Analytical and Environmental Instrumentation

GUG/W/24/14363

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Notes :

1. All questions carry marks as indicated.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Illustrate your answers wherever necessary with the help of neat sketches.

- OR**

- OR**

- P.T.O

- b) Illustrate with neat sketch: 8
- i) Construction
- ii) Working principle and
- iii) Applications of High Performance Liquid Chromatography

OR

6. a) Explain the sample injection techniques used in gas chromatograph. 8
- b) Describe with block diagram the working of thin layer chromatography. 8
7. a) Draw and explain Infra red gas analyzer. 8
- b) What are the different electrochemical methods for oxygen measurement? 8

OR

8. a) With neat diagram explain the working principle of thermal conductivity analyzer. 8
- b) Discuss how to estimate the amount of hydrocarbon present in air with neat instrumentation setup. 8
9. a) Elaborate non-contact type water conductivity meter. 8
- b) Elaborate the categories of water pollution. 8

OR

10. a) Discuss how dissolved oxygen in water can be measured. 8
- b) List different types of electrodes used for measurement of pH. Discuss any two electrodes in details. 8
