

SECTION-C

Note: Long answer type questions. Attempt any three questions.
3x10=30

- Q.3 Draw & Explain basic building blocks of an analytical instrument.
- Q.4 Explain paramagnetic oxygen analyzer in detail.
- Q.5 Explain the electrodes used for pH measurement in detail.
- Q.6 What do you mean by Biosensor? Explain amperometric biosensor in detail.
- Q.7 Write short note on any two.
- i) Volta metric Biosensor.
 - ii) Visible emission monitoring system.
 - iii) Electrochemical cell.

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Roll No.

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6th Sem. / I&C

Subject : Analytical & Environmental Instruments

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts.
(15x2=30)

- Q.1 a) Biosensor.
- b) Water pollution.
- c) _____ is the unit of conductivity.
- d) Potentiometer.
- e) Transducer.
- f) Pollutants.
- g) Define pH.
- h) _____ is pH value of pure water.
- i) Spectroscopy.

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(4)

031565/1562

(1)

031565/1562

- j) Analyzer.
- k) Display Device.
- l) Signal conditioning.
- m) Potentiometer.
- n) Give one application of gas chromatography.
- o) Give one application of smoke defectes.
- p) Name the electrodes used for pH measurement.
- q) Instrument.
- r) Pollution.
- iv) Explain emission spectroscopy.
- v) Discuss principle of working of magnetic wind analyzer.
- vi) Explain gas chromatography.
- vii) Discuss the working of liquid chromatography.
- viii) Explain electrochemical analyzer.
- ix) Explain emission standards.
- x) Discuss the types & concentration of various gas pollutants in atmosphere.
- xi) Explain aqua meter.
- xii) Discuss the principle of Ionization smoke detector.
- xiii) Explain conductivity meter.
- xiv) Discuss optical biosenser.
- xv) Explain the emission controls for coal fired power plants.

SECTION-B

Note: Short answer type questions. Attempt any ten parts
10x4=40

- Q.2
- i) Explain basic concept of mass spectroscopy.
 - ii) Discuss infrared gas analyzer.
 - iii) Explain thermal conductivity analysis.

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031565/1562

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031565/1562