

WWW : Web pages – home pages – web browsers – search engines – internet chat – chatting on web.

E-mail: Introduction – working way – mailing basics – e-mail ethics – advantages and disadvantages – creating e-mail – receiving and sending e-mails.

Intranet: Characterisation – advantages – drawbacks – need for intranet – extranet.

Applications of internet in Chemistry: Websites in Literature survey in chemistry – popular websites in chemistry – data bases in chemistry – URLs – WAIS – downloading the attachment / PDF files – opening, browsing and searching a website – literature searching online.

Practicals (Class work only):

1. Creating e-mail id, sending and receiving e-mails, attachment files, PDF files. Opening, browsing and searching a website – down loading – literature survey in chemistry – online searching.

Reference Books

1. Evangelos Petroutsos, Mastering "Visual Basic 6", BPB Publication, First Indian Edition, New Delhi, 1998, pp 1-51, 99-174, 177-180, 209-211, 227-262.
2. David Jung, Pierre Boutquin, John D. Conley III, Loren Eidahl, Lowell Mauer and Jack Pudam, "Visual Basic 6 Super Bible", First Indian Edition, Technedia, New Delhi, 1999.
3. Gary Cornell, "Visual Basic 6", Tata-McGraw Hill, New Delhi, 1998.
4. Barbara Kasser, "Using the Internet", Fourth Edition, EE Edition, New Delhi, 1998.
5. K.V. Raman, "Computers in Chemistry", Tata-McGraw Hill Publishing Company, New Delhi, 1993.
6. Alexis Leon and Mathews Leon, "Fundamentals of Information Technology", (Chapters 17 – 19 & 21 – 23), Leon Vikas, Chennai (1999).

Semester I Non-Major Elective

Environmental Science

Unit I Introduction and Classification

Introduction-Environmental science-Environmental chemistry-Ecology-Definition-Eco-system-Cycling of mineral elements and gases- Phosphate cycle-Carbon cycle-Hydrogen cycle- Nitrogen cycle-Hydrological cycle-Environmental segments-Pollution and its types: air pollution-water pollution- soil pollution- radioactive pollution- thermal pollution- noise pollution- marine pollution- other types of pollution- and its effects and control-remedial measures.

Unit : II Air Pollution

Introduction-sources of air pollution-air pollutants-classification and effects of air pollutants-oxides of nitrogen, sulphur and carbon-acid rain-effects and control-hydrogen sulphide- effects and control-carbon mono oxide- effects and control-photochemical smog- effects and control-ly zsh- effects and control-green house effect-global warming- effects and control-ozone layer-ozone depletion-chlorofluoro carbons- effects and control.

Unit : III Water Pollution

Introduction- types of water- water pollution-sources of water pollution- water pollutants-classification-physical, chemical and biological-inorganic pollutants and toxic metals-organic pollutants-radioactive pollutants in water-pesticides and fertilizers-suspended particles-water quality-water quality index- ill effects of water pollutants-fluorosis-water pollution control-water treatment-primary, secondary and tertiary treatment- desalination-reverse osmosis-sewage and industrial waste water treatment.

Unit : IV Soil Pollution

Introduction- types of soil-soil pollution-types-indicators of soil pollution-plants as indicators of pollution-sources of soil pollution-fertilizers and pesticides- radio active pollutants-solid wastes-soil sediments as pollutant-soil erosion-treatment of soil pollutants-treatment of solid wastes-thermal methods-land filling-composting-land reclamation-remedial measures for soil pollution.

Unit : V Analysis of Pollutants

Introduction-analysis of air pollutants-units- sampling-devices and methods for sampling-measurement: UV-Visible spectrometry-IR spectrometry-emission spectrometry-turbidimetry nephelometry-gas chromatography-HPLC-chemiluminescence of nitrogen oxides-IR photometry-conductometry-analysis of water pollutants- units-