



Department of Chemistry
OBAFEMI AWOLowo UNIVERSITY, ILE-IFE
Part II B.Sc. Industrial Chemistry Degree Examination
RAIN SEMESTER EXAMINATION, 2022/2023 SESSION

ICH 202 – Environmental and Petroleum Chemistry

Instruction: Attempt all questions.

Time Allowed: 2½ Hours

- 1 (a.) Describe the characteristics of the different layers of the atmosphere (5 mks)
- (b.) i) Define the term pollution? (3 mks)
- ii) Differentiate between pollution and contamination (3 mks)
- (c.) Give five examples of point source pollution and their relevant pollutants (5 mks)
- 2 (a.) Define the term water quality and list the four classes of water quality parameters (4 mks)
- (b.) i) Discuss five chemical parameters used to study water quality (5 mks)
- ii) Mention four effects of temperature on the characteristics of water (2 mks)
- (c.) Enumerate four effects of poor solid waste management (8 mks)
- 3 (a.) Write short notes on the following constituents of petroleum:
- i.) Unsaturated Hydrocarbons, and
- ii.) Non-Hydrocarbon Components (6 mks)
- (b.) i.) Define petrochemical industry
- ii.) With the support of sequential reaction steps, briefly describe the synthesis of formaldehyde from methane (10 mks)
- 4 (a.) i.) Write short note on natural gas
- ii.) When is natural gas considered “lean” or “dry”? (5 mks)
- (b.) i.) Briefly describe petroleum gas
- ii.) Briefly explain the term sour gas (6 mks)
- (c.) Itemize and describe briefly the refining processes of petroleum to its products (10 mks)

