

LIBERAL STUDIES PAPER 1

8:30 am – 10:30 am (2 hours)
This paper must be answered in English

- (1) This paper consists of three questions. **Answer ALL questions.**
- (2) The Question-Answer Book is inserted into this Question Paper. Write your answers in the spaces provided in the **Question-Answer Book**. Answers written in this Question Paper will **NOT** be marked.
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- (4) After the announcement of the start of the examination, you should first write your Candidate Number in the space provided on Page 1 of the Question-Answer Book and stick barcode labels in the spaces provided on Pages 1, 3 and 5.
- (5) Supplementary answer sheets will be supplied on request. Write your Candidate Number, mark the question number box and stick a barcode label on each sheet, and fasten them with string **INSIDE** the Question-Answer Book.
- (6) No extra time will be given to candidates for sticking on the barcode labels or filling in the question number boxes after the "Time is up" announcement.
- (7) Candidates are reminded that this subject emphasises the ability to present and support points of view in a clear, concise and logical manner, rather than the ability to recall facts.

Not to be taken away before the
end of the examination session

2013 Dse Ls Paper 1

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Environmental Chemistry (Volume-I) Dr. Benvikram Barman, Dr. Bhupendra Singh Banjare, Dr. Deepak Kumar Sahu, Dr. Swati Chandrawanshi, Dr. Shobhana Ramteke, Ms. Rashmita Khuntia, 2025-09-19 Environmental Chemistry Volume I DSE Based on Syllabus of NEP 2020 is a comprehensive textbook that explores the intricate relationship between chemistry and the environment. Designed for students, educators, and researchers, this volume presents a planned study of fundamental environmental concepts and processes integrating both theoretical and applied aspects. The book begins with a strong foundation in environmental chemistry and systematically covers the essential components of the environment including the biosphere, hydrosphere, lithosphere, and atmosphere. It emphasizes ecological principles, classification of ecosystems, and the functioning of biogeochemical cycles, highlighting the circulation of nitrogen, carbon, phosphorus, hydrogen, and oxygen, which are vital for sustaining life on Earth. Further, the volume addresses critical environmental issues such as thermal pollution, noise pollution, and water-related concerns. Detailed discussions include the origin, physico-chemical properties, and sources of water, the hydrological cycle, criteria of water quality, and modern water management practices like watershed management and rainwater harvesting. The book also provides insights into water pollution, its sources, harmful effects, and control strategies. The atmospheric portion of the text examines the structure, major regions, and composition of the atmosphere along with an in-depth discussion on temperature inversion and its role in air pollution episodes. This volume serves as an essential resource for undergraduate and postgraduate students of chemistry, environmental science, and related fields. It will also benefit academicians and researchers with sustainable environmental management. *Handbook of Computer Architecture* Anupam Chattopadhyay, 2024-12-20 This handbook presents the key topics in the area of computer architecture, covering from the basic to the most advanced topics including software and hardware design methodologies. It will provide readers with the most comprehensive, updated reference information covering applications in single-core processors, multicore processors, application-specific processors, reconfigurable architectures, emerging computing architectures, processor design, and programming flows, test, and verification. This information benefits the readers as a full and quick technical reference with a high-level review of computer architecture technology, detailed technical descriptions, and the latest practical applications. *Ecosystem Services from Forest Landscapes* Ajith H. Perera, Urmas Peterson, Guillermo Martínez Pastur, Louis R. Iverson, 2018-03-22 Over the last two decades, the topic of forest ecosystem services has attracted the attention of researchers, land managers, and policy makers around the globe. The services rendered by forest ecosystems range from intrinsic to anthropocentric benefits that are typically grouped as provisioning, regulating, supporting, and cultural. The research efforts, assessments, and attempts to manage forest ecosystems for their sustained services are now widely published in scientific literature. This volume focuses on broad-scale aspects of forest ecosystem services beyond individual stands to large landscapes. In doing so, it illustrates the conceptual and practical opportunities as

well as challenges involved with planning for forest ecosystem services across landscapes regions and nations The goal here is to broaden the scope of land use planning through the adoption of a landscape scale approach Even though this approach is complex and involves multiple ecological social cultural economic and political dimensions the landscape perspective appears to offer the best opportunity for a sustained provision of forest ecosystem services **Cities and Agriculture** Henk de Zeeuw, Pay Drechsel, 2015-09-16 As people increasingly migrate to urban settings and more than half of the world's population now lives in cities it is vital to plan and provide for sustainable and resilient food systems which reflect this challenge This volume presents experience and evidence based state of the art chapters on the key dimensions of urban food challenges and types of intra and peri urban agriculture The book provides urban planners local policy makers and urban development practitioners with an overview of crucial aspects of urban food systems based on an up to date review of research results and practical experiences in both developed and developing countries By doing so the international team of authors provides a balanced textbook for students of the growing number of courses on sustainable agriculture food and urban studies as well as a solid basis for well informed policy making planning and implementation regarding the development of sustainable resilient and just urban food systems *St. Louis Daily Market Reporter and Merchants Exchange Price Current* ,1883

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