

**Advanced Subsidiary GCE
 CHEMISTRY A**

F322 QP

Unit F322: Chains, Energy and Resources

Specimen Paper

Candidates answer on the question paper.

Time: 1 hour 45
 minutes

Additional Materials:
 Data Sheet for Chemistry (inserted)
 Scientific calculator

Candidate
 Name

Centre
 Number

Candidate
 Number

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and Candidate number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- **WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED.**

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
-  You will be awarded marks for the quality of written communication where this is indicated in the question.
- You may use a scientific calculator.
- A copy of the Data Sheet for Chemistry is provided as an insert with this question paper.
- You are advised to show all the steps in any calculations.
- The total number of marks for this paper is **100**.

FOR EXAMINER'S USE		
Qu.	Max.	Mark
1	14	
2	13	
3	15	
4	13	
5	12	
6	16	
7	17	
TOTAL	100	

This document consists of **18** printed pages, **2** blank pages and a *Data Sheet for Chemistry*.

June 2012 F322 Paper

SB Merriam



June 2012 F322 Paper:

AI Act Rolf Schwartmann, Tobias O. Keber, Kai Zenner, 2025-01-13 The new AI act will have significant consequences for civil society and the economy The text will enter into force in the summer of 2024 the first provisions will apply just six months later The aim of the European legislator was to provide better protection against the dangers of AI while at the same time promoting innovation In parallel to the beginning implementation of the AI Act the practical guide tries to elaborate and assess the regulation systemically It provides legal users with an initial but reliable orientation when using the technology In addition to the basics in the AI regulation itself practice relevant areas are classified in the annexes on high risk AI systems The use cases range from biometric identification of natural persons to questions of education as well as labor law to the use in the judiciary related to law enforcement and administration of justice Special attention is paid to the comprehensible communication of the complex technical interrelationships in the use of artificial intelligence In addition the questions of the relationship to the other digital and data law of the EU above all the GDPR which arise in business practice are assessed This becomes particularly relevant for example in the case of transparency requirements technical data protection and risk assessment Finally the work addresses practice relevant liability issues and presents enforcement by the supervisory regime At a glance Classification of concrete use cases in regulation by the AI Regulation AI Regulation in distinction to the GDPR e.g. transparency requirements technical data protection and risk assessment Mediation of technical contexts in the implementation of legal obligations Liability for AI Checklists for the use of AI in the company Professor Dr Rolf Schwartmann is head of the Cologne Research Center for Media Law at the Cologne University of Technology and chairman of the Society for Data Protection and Data Security as well as editor and author of numerous specialist publications on data protection and digital law Professor Dr Tobias Keber is the State Commissioner for Data Protection and Freedom of Information in Baden Württemberg and previously conducted research on Artificial Intelligence at the Stuttgart Media University Kai Zenner is Head of Office for MEP Axel Voss EPP rapporteur for the AI Regulation and has been intensively involved in the negotiations for the adoption of the law Besides he is One AI Member OECD and advises the High Level Advisory Body on AI HLAB AI of the United Nations In June 2023 he received the MEP Award for best Accredited Parliamentary Assistant for his work and dedication in the European Parliament AI Act AI KI artificial intelligence künstliche Intelligenz

Robert Wedderburn Ryan Hanley, 2025-02-25 The first ever biography of the ultra radical thinker Robert Wedderburn from his native Jamaica to metropole London by an award winning historian Robert Wedderburn 1762 1834 5 was one of the most charismatic irascible and radical intellectuals of the eighteenth and early nineteenth century Atlantic world Born to an enslaved woman and a slavemaster in Jamaica and moving in the radical working class circles of London Wedderburn made his name as a fiery political writer and orator before dying forgotten in poverty Among the few abolitionists bold enough to publicly call for the enslaved in the British West Indies to rise up and violently overthrow their

colonial masters Wedderburn was also among the most outspoken and amid an increasingly repressive British establishment dangerous advocates for domestic political reform and working class rights From award winning scholar Ryan Hanley this is the first full length biography of a man increasingly recognized as central to Black radical political thought in the Revolutionary Atlantic Tapping newly rediscovered sources Hanley details Wedderburn s extraordinary public and private life explores the central influence of enslaved women on his political ideas and offers fresh analysis of his contributions to British political thought and activism Inventing Academic Freedom Peter C. Kent,2012-09-25 An account of the campus sit in and ensuing controversy that triggered a revolution in Canadian universities and was key to establishing the principles of academic freedom in Canada *Mini and Micro Computers in Agriculture* Maria G. Pisa,1984 Index, The Papers of the Continental Congress, 1774-1789 ,1978 Index, The Papers of the Continental Congress, 1774-1789: East Whiteland-Leacraft, G ,1978 **Introduction to Radiologic and Imaging Sciences and Patient Care E-Book** Arlene M. Adler,Richard R. Carlton,Kori L. Stewart,2022-08-11 Selected for Doody s Core Titles 2024 with Essential Purchase designation in Radiologic Technology Using a clear and concise format Introduction to Radiologic and Imaging Sciences and Patient Care 8th Edition familiarizes you with the imaging sciences and covers the patient care skills necessary for clinical practice It offers current comprehensive content that meets the relevant standards set by the American Society of Radiologic Technologists ASRT Curriculum Guide and the American Registry of Radiologic Technologists ARRT Task List for certification examinations This edition includes updates on current digital imaging and instrumentation providing the essential information and tools you need to master any introduction to radiologic sciences or patient care class Chapter review questions and lab activities available online and on tear sheets in the text give you easy access to study materials for on the go learning In addition to helping you prepare for certification the content provides useful and practical information that is essential for professional practice and clinical competency Expanded and updated career content addresses professional development and advancement Patient care content includes information on biomechanics and ergonomics of the radiologic and imaging sciences professional Information management coverage provides an overview of health informatics for the radiologic and imaging sciences professional Step by step procedures presented in boxed lists throughout the text supply you with easy to follow steps for clinical success Back of book review questions and questions to ponder provide opportunities for further review and greater challenge More than 300 photos and line drawings help you understand and visualize patient care procedures Strong pedagogy including chapter objectives key terms outlines and summaries organize information and ensure you understand what is most important in every chapter NEW Comprehensive coverage encompasses the greater breadth and depth of all primary modalities of the radiologic and imaging sciences as they relate to patient care **Quick Bibliography Series** ,1976 **Bibliography of Agriculture** ,1976 Index, The Papers of the Continental Congress, 1774-1789: Aachen - East Twinsey ,1978

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