

Birla Institute of Technology and Science, Pilani (Rajasthan)
First Semester 2022-23, December 21, 2022
Comprehensive Examination (Open Book) Part -II
CHEM F214; Inorganic Chemistry I

Time: 2 hours 25 Mins

Max. Marks: 56

Q.1(a) Δ = (actual bond energy) - (energy for 100% covalent bond). Find out the Pauling electronegativities of C and Cl where the Δ values of C-H and H-Cl are 24.3 and 102.3 kJ/mol respectively [consider $\chi_H = 0$]. If χ_H is shifted to 2, is there any advantage in the scale? [3]

(b) Discuss the effect of aniline added to ammonia based on leveling effect. [2]

(c) There exists a relationship between energy band gap and electronegativity of the elements present in a compound. What is the relation these hold? Can you provide some reasons for the existing relationship? [1+2]

(d) Calculate the equilibrium constant for the disproportionation reaction:

$2\text{Cu}^+ (\text{aq}) \rightleftharpoons \text{Cu}(\text{s}) + \text{Cu}^{2+} (\text{aq})$ at 298 K
 $E^0(\text{Cu}^+/\text{Cu}) = 0.52 \text{ V}$ and $E^0(\text{Cu}^{2+}/\text{Cu}^+) = 0.15 \text{ V}$; $2.303RT/F = 0.0591 \text{ V}$ at 298 K]. [4]

(e) Account for the fact that $\text{CH}_3\text{CH}_2\text{O}^-$ is much more basic than CH_3COO^- . [2]

Q. 2 (a) How would you synthesize $\text{P}(\text{SiMe}_3)_3$ from Phosphorus? Draw the structure of $\text{P}(\text{SiMe}_3)_3$. Write down the expected product of the reaction between CH_3COCl and $\text{P}(\text{SiMe}_3)_3$. [1+1+1]

(b) Account for the fact that in aqueous solution, lithium is as good a reducing agent as Cs despite of having higher ionization energy. [3]

(c) With the mention of the products obtained when CCl_4 and SiCl_4 individually reacting with H_2O , provide justification to support the observations for these two reactions. [4]

(d) What is the role of $(n\text{-Pr}_4\text{N})\text{OH}$ in the synthesis of ZSM-5? Which property of ZSM-5 will be tweaked by Si to Al ratio? If you want to introduce Fe^{2+} ions in ZSM-5, how would you proceed? [2+1+1]

Q. 3(a) To prepare I_3^+ , an oxidizing agent like bis(fluorosulphonyl)peroxide $\text{FSO}_2\text{OOSO}_2\text{F}$ is used to react with I_2 . Would you prefer H_2O_2 over $\text{FSO}_2\text{OOSO}_2\text{F}$ for this reaction? Justify your answer. [3]

(b) Plenty of fluoride compounds of Xe are known. What could be the possible reason(s) for not having reports of formation of fluorides of Ne? If you imagine a Ne-fluoride compound, what would be the formula and what type of bonding is expected? [2+2]

(c) Find out the symmetry point group of boron-phosphorus analogue of borazine $\text{B}_3\text{P}_3(\text{Ph})_6$ [Consider the -Ph group as an atom] and mention the symmetry elements present. Amongst $\text{B}_3\text{P}_3(\text{Ph})_6$ and borazine, who is more prone to non-planar structure and why? [2+2]

(d) Comment on the aromaticity of S_4N_2 having a closed ring structure. [3]

Q.4(a) Justify the participation of specific orbitals in π bonding from P and N atoms in trimeric phosphazene, $\text{P}_3\text{N}_3\text{Cl}_6$. With the typical sets of orbitals once chosen from P and N centers, discuss the 'island model' for the molecule $\text{P}_3\text{N}_3\text{Cl}_6$. [2+2]

(b) Draw the molecular orbitals of the 3c-2e bond considering a hypothetical model with the atoms as H-B-H in B_2H_6 . Why is the 3c-2e bonds on B-H-B system justified over 3c-2e bond on H-B-H system? [3+2]

(c) Explain the bond order of Re-Re bond in $[\text{Re}_2\text{Cl}_8]^{+}$. Justify the arrangement of chlorine atoms around each Re atom relatively and the geometry of each Re atom. [2+3]

*****END*****

June 2013 F214 Past Paper

JG Myers

A red circular graphic with a gradient, appearing as a semi-circle or a partial circle, located to the right of the JG Myers text.

June 2013 F214 Past Paper:

Thank you unquestionably much for downloading **June 2013 F214 Past Paper**. Most likely you have knowledge that, people have look numerous period for their favorite books once this June 2013 F214 Past Paper, but stop up in harmful downloads.

Rather than enjoying a good book later than a mug of coffee in the afternoon, instead they juggled like some harmful virus inside their computer. **June 2013 F214 Past Paper** is simple in our digital library an online admission to it is set as public thus you can download it instantly. Our digital library saves in multipart countries, allowing you to get the most less latency era to download any of our books in the same way as this one. Merely said, the June 2013 F214 Past Paper is universally compatible in the manner of any devices to read.

https://staging.conocer.cide.edu/public/detail/default.aspx/gods_world.pdf

Table of Contents June 2013 F214 Past Paper

1. Understanding the eBook June 2013 F214 Past Paper
 - The Rise of Digital Reading June 2013 F214 Past Paper
 - Advantages of eBooks Over Traditional Books
2. Identifying June 2013 F214 Past Paper
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an June 2013 F214 Past Paper
 - User-Friendly Interface
4. Exploring eBook Recommendations from June 2013 F214 Past Paper
 - Personalized Recommendations
 - June 2013 F214 Past Paper User Reviews and Ratings
 - June 2013 F214 Past Paper and Bestseller Lists

5. Accessing June 2013 F214 Past Paper Free and Paid eBooks
 - June 2013 F214 Past Paper Public Domain eBooks
 - June 2013 F214 Past Paper eBook Subscription Services
 - June 2013 F214 Past Paper Budget-Friendly Options
6. Navigating June 2013 F214 Past Paper eBook Formats
 - ePub, PDF, MOBI, and More
 - June 2013 F214 Past Paper Compatibility with Devices
 - June 2013 F214 Past Paper Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of June 2013 F214 Past Paper
 - Highlighting and Note-Taking June 2013 F214 Past Paper
 - Interactive Elements June 2013 F214 Past Paper
8. Staying Engaged with June 2013 F214 Past Paper
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers June 2013 F214 Past Paper
9. Balancing eBooks and Physical Books June 2013 F214 Past Paper
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection June 2013 F214 Past Paper
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine June 2013 F214 Past Paper
 - Setting Reading Goals June 2013 F214 Past Paper
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of June 2013 F214 Past Paper
 - Fact-Checking eBook Content of June 2013 F214 Past Paper
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

June 2013 F214 Past Paper Introduction

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading June 2013 F214 Past Paper free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading June 2013 F214 Past Paper free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading June 2013 F214 Past Paper free PDF files is convenient, its

important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but its essential to be cautious and verify the authenticity of the source before downloading June 2013 F214 Past Paper. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether its classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be cautious and verify the legality of the source before downloading June 2013 F214 Past Paper any PDF files. With these platforms, the world of PDF downloads is just a click away.

FAQs About June 2013 F214 Past Paper Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. June 2013 F214 Past Paper is one of the best book in our library for free trial. We provide copy of June 2013 F214 Past Paper in digital format, so the resources that you find are reliable. There are also many Ebooks of related with June 2013 F214 Past Paper. Where to download June 2013 F214 Past Paper online for free? Are you looking for June 2013 F214 Past Paper PDF? This is definitely going to save you time and cash in something you should think about.

Find June 2013 F214 Past Paper :

god's world

global tectonic zones supercontinent formation disposal

gloom looms

glossary for the food industries 2nd edition

global warming a beginners guide to our changing climate

global focus u. s. foreign policy at the turn of the millennium

go solo cd trombone

global nation australia and the politics of globalisation

god calls a people a journey through the old testament

global studies a competency review test by osborne john

globalization on the line culture capital and citizenship at u. s. borders

goat a memoir

global economic prospects and the developing countries 1998-99 beyond financial crisis

goat in the rug

go-givers in a go-getter world

June 2013 F214 Past Paper :

Phuket Beach Hotel Case Analysis Corporate Finance ... Phuket Beach hotel case ; Mutually Exclusive Capital Projects ; opportunity cost of the projects. Therefore, the discount rate should be weighted average cost ; of ... Solved Phuket Beach Hotel Analysis How do I calculate the May 17, 2015 — Question: Phuket Beach Hotel Analysis How do I calculate the decrease in net room revenue? I know the answers are YR 1=1.65 million, ... Phuket Beach Hotel Final | PDF | Net Present Value Phuket Beach Resort Case AnalysisGraduate School of BusinessDe La Salle University. 11.Staff for the karaoke pub could be recruited internally because the hotel ... Case Study Phuket Beach Hotel 2 - HKU 08/15 was looking for a venue in Patong beach area for setting up another outlet, and was eyeing an. unused space owned by the Hotel. At this point, the space was ... Phuket Beach Hotel Valuing Mutually Exclusive Capital ... Following questions are answered in this case study solution: Please assess the economic benefits and costs associated with each of the capital projects. What ... Phuket Beach Case - 1683 Words PHUKET BEACH HOTEL: VALUING MUTUALLY EXCLUSIVE PROJECTS I. STATEMENT OF THE PROBLEM This is an assessment of the different costs and benefits of two ... Phuket Beach Hotel Phuket Beach Hotel: Valuing Mutually Exclusive Capital Projects (Case 27-3) The unused space of the Phuket Beach Hotel w... Phuket Beach Hotel: Valuing Mutually Exclusive Capital ... Case Analysis, Phuket Beach Hotel: Valuing Mutually Exclusive Capital Projects Case Study Solution, 1. Calculate and rank the projects according to payback ... Phuket Beach Hotel: Valuing Mutually Exclusive Capital ... The case presents sufficient information to build-cash flow forecasts for each project and to rank the mutually exclusive projects using various evaluation ... Phuket Beach Hotel Case Study.docx Phuket Beach Hotel

Case Study Finance 380 Naomi Smith Summary Phuket Beach Hotel is faced with the decision of funding an in-house bar with a projected ... Galore Park This complete set of answers to Mathematics for Common Entrance 13+ Exam Practice Questions includes worked examples and diagrams to ... ce mathematics (at 11+, 13+ and case) The ISEB Common Entrance Maths aims to develop fluency in mathematical skills and reasoning. Access ISEB CE Maths 11+, 13+ & CASE exam support. MATHEMATICS be taught in Year 6. Candidates will be required to work one paper of 60 ... Tested in a new-style Mental Arithmetic paper with written questions rather than ... Mathematics Year 6 Answers - Hodder - Free Trial - Classoos Nov 28, 2014 — Summary. Features the complete set of answers to the exercises in Mathematics Year 6, as well as a selection of photocopiable worksheets to ... 11+ Maths ISEB Practice Papers Pack 1 4 complete test papers reflecting 11 plus ISEB Main test; Detailed step by step answers are available only on the website; Covers all the topics of the ISEB ... ISEB Common Pre-Test Mathematics Paper 2 ○ The content of this paper is similar to that of the mathematics ISEB Common Pre-Test taken in year. 6/7 for independent school entry. ○ Please remember ... 11 Plus Maths Past Papers With Detailed Answers Free 11+ Practice Papers These free practice papers contain realistic 11+ questions at the same level as the ones children will answer in the final tests. There are two sets of ... galore park 9781510400986 Mathematics Year 6 Textbook Answers. PDF Download. £14.99 +VAT ... 9781398321366 Common Entrance 13+ Additional Mathematics for ISEB CE and KS3 ... The ISEB Digital Pre-Test - School Entrance Specialists The core Common Entrance exam syllabus consists of English, Mathematics and Science papers. ... Year 5 to the January of Year 6. This encompasses the whole ... Fiat Ducato Workshop Manual 2006 - 2017 Free Factory ... Download a free pdf Fiat Ducato workshop manual / factory service manual / repair manual for cars built between 2006 - 2017. Fiat Ducato Workshop Manual Download Fill Fiat Ducato Workshop Manual Download, Edit online. Sign, fax and printable from PC, iPad, tablet or mobile with pdfFiller □ Instantly. Try Now! Repair manuals and video tutorials on FIAT DUCATO FIAT DUCATO manual pdf free download. How to change fuel filter on FIAT ... Repair instructions for FIAT DUCATO 2020. Free download PDF. 1.9 MB. Step-by-step ... Fiat Ducato Repair & Service Manuals (62 PDF's ... Workshop Manuals,0 Ducato Owners Manuals ... manuals) is available to download for free in PDF format. How to download a Fiat Ducato Repair Manual (for any year). Fiat Ducato 2006-2017 Workshop Repair Manual Download ... Fiat Ducato PDF workshop repair manual Download As used by Fiat garages worldwide. Repair, Service, Wiring Diagrams etc. Instant Download. Fiat Ducato Service Repair Manuals | Free Download Free Online Pdf for Fiat Ducato Workshop Manuals , Fiat Ducato OEM Repair Manuals, Fiat Ducato Shop Manuals, Fiat Ducato Electrical Wiring Diagrams (EWD). Fiat Ducato workshop manual Nov 28, 2021 — Their FAQs seem to suggest that the normal Free downloads are still available with waiting time, speed limits etc. although everything is brought with ... Repair manuals - Fiat Ducato II fiat-ducato-citroen-jumper-peugeot-boxer-repair-manual-1994-2002.pdf, 1994-fiat-ducato-repair-manual.pdf, ducato-zf-4hp20-transmission-repair-manual.pdf, ... Fiat Ducato Workshop Manual 2.2L and 3.0L HDi 2006 To ...

Fiat_Ducato_Workshop_Manual_2.2L_and_3.0L_HDi_2006_to_2017 - Read book online for free. manuel de réparation moteur 2.2 ford puma fiat ducato citroen ... Fiat Ducato 1981-1993 Workshop Repair Manual Download ... Fiat Ducato 1981-1993 Workshop Manual Download PDF. Covers all Service, Repair, Maintenance, Wiring Diagrams. Instant Download.