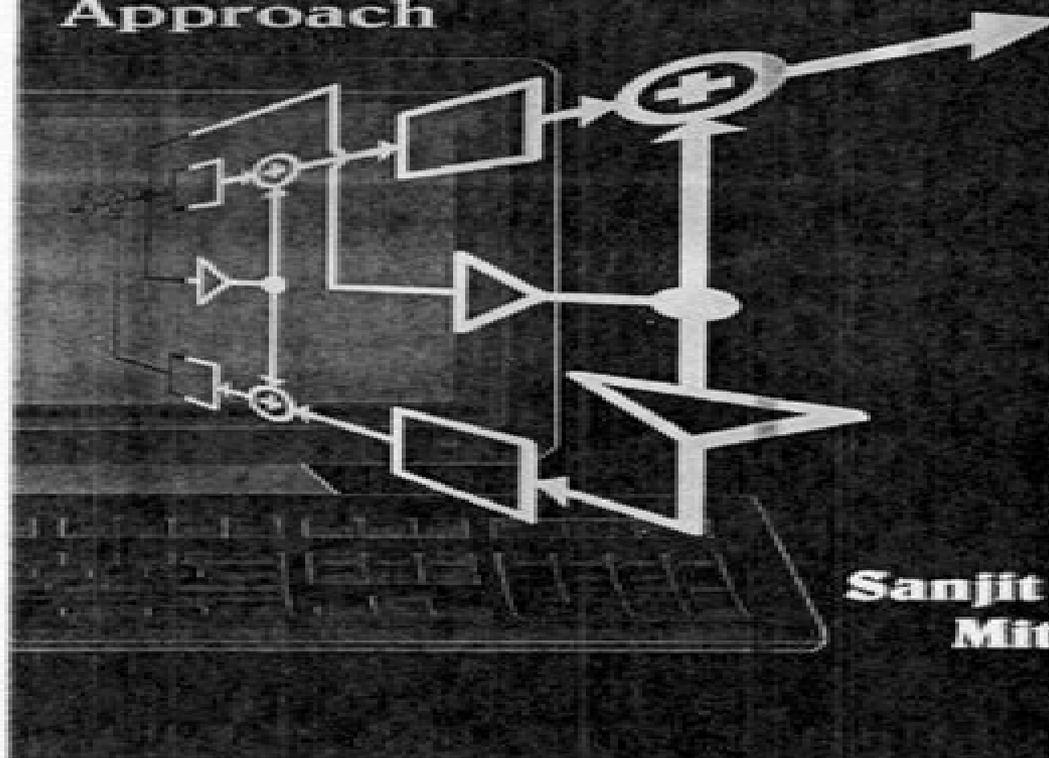


Solutions Manual

to accompany

Digital Signal Processing A Computer-Based Approach



**Sanjit K.
Mitra**

Prepared by
Rajeev Gandhi

Digital Signal Processing Mitra 4th Edition Solution Manual

AW Rasmussen



Digital Signal Processing Mitra 4th Edition Solution Manual:

Embark on a breathtaking journey through nature and adventure with is mesmerizing ebook, **Digital Signal Processing Mitra 4th Edition Solution Manual** . This immersive experience, available for download in a PDF format (*), transports you to the heart of natural marvels and thrilling escapades. Download now and let the adventure begin!

<https://db1.greenfirefarms.com/data/publication/default.aspx/Trending%20Ai%20Seo%20Tools%20For%20Beginners%20For%20Creators.pdf>

Table of Contents Digital Signal Processing Mitra 4th Edition Solution Manual

1. Understanding the eBook Digital Signal Processing Mitra 4th Edition Solution Manual
 - The Rise of Digital Reading Digital Signal Processing Mitra 4th Edition Solution Manual
 - Advantages of eBooks Over Traditional Books
2. Identifying Digital Signal Processing Mitra 4th Edition Solution Manual
 - 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 Digital Signal Processing Mitra 4th Edition Solution Manual
 - User-Friendly Interface
4. Exploring eBook Recommendations from Digital Signal Processing Mitra 4th Edition Solution Manual
 - Personalized Recommendations
 - Digital Signal Processing Mitra 4th Edition Solution Manual User Reviews and Ratings
 - Digital Signal Processing Mitra 4th Edition Solution Manual and Bestseller Lists
5. Accessing Digital Signal Processing Mitra 4th Edition Solution Manual Free and Paid eBooks
 - Digital Signal Processing Mitra 4th Edition Solution Manual Public Domain eBooks
 - Digital Signal Processing Mitra 4th Edition Solution Manual eBook Subscription Services
 - Digital Signal Processing Mitra 4th Edition Solution Manual Budget-Friendly Options

6. Navigating Digital Signal Processing Mitra 4th Edition Solution Manual eBook Formats
 - ePub, PDF, MOBI, and More
 - Digital Signal Processing Mitra 4th Edition Solution Manual Compatibility with Devices
 - Digital Signal Processing Mitra 4th Edition Solution Manual Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Digital Signal Processing Mitra 4th Edition Solution Manual
 - Highlighting and Note-Taking Digital Signal Processing Mitra 4th Edition Solution Manual
 - Interactive Elements Digital Signal Processing Mitra 4th Edition Solution Manual
8. Staying Engaged with Digital Signal Processing Mitra 4th Edition Solution Manual
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Digital Signal Processing Mitra 4th Edition Solution Manual
9. Balancing eBooks and Physical Books Digital Signal Processing Mitra 4th Edition Solution Manual
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Digital Signal Processing Mitra 4th Edition Solution Manual
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Digital Signal Processing Mitra 4th Edition Solution Manual
 - Setting Reading Goals Digital Signal Processing Mitra 4th Edition Solution Manual
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Digital Signal Processing Mitra 4th Edition Solution Manual
 - Fact-Checking eBook Content of Digital Signal Processing Mitra 4th Edition Solution Manual
 - 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

Digital Signal Processing Mitra 4th Edition Solution Manual Introduction

Digital Signal Processing Mitra 4th Edition Solution Manual Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Digital Signal Processing Mitra 4th Edition Solution Manual Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Digital Signal Processing Mitra 4th Edition Solution Manual : This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for Digital Signal Processing Mitra 4th Edition Solution Manual : Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks Digital Signal Processing Mitra 4th Edition Solution Manual Offers a diverse range of free eBooks across various genres. Digital Signal Processing Mitra 4th Edition Solution Manual Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Digital Signal Processing Mitra 4th Edition Solution Manual Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Digital Signal Processing Mitra 4th Edition Solution Manual, especially related to Digital Signal Processing Mitra 4th Edition Solution Manual, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Digital Signal Processing Mitra 4th Edition Solution Manual, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Digital Signal Processing Mitra 4th Edition Solution Manual books or magazines might include. Look for these in online stores or libraries. Remember that while Digital Signal Processing Mitra 4th Edition Solution Manual, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Digital Signal Processing Mitra 4th Edition Solution Manual eBooks for free, including popular titles. Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Digital Signal Processing Mitra 4th Edition Solution Manual full book , it can give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Digital Signal Processing Mitra 4th Edition Solution Manual eBooks, including some popular titles.

FAQs About Digital Signal Processing Mitra 4th Edition Solution Manual Books

What is a Digital Signal Processing Mitra 4th Edition Solution Manual PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it.

How do I create a Digital Signal Processing Mitra 4th Edition Solution Manual PDF? There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF.

How do I edit a Digital Signal Processing Mitra 4th Edition Solution Manual PDF? Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities.

How do I convert a Digital Signal Processing Mitra 4th Edition Solution Manual PDF to another file format? There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobat's export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats.

How do I password-protect a Digital Signal Processing Mitra 4th Edition Solution Manual PDF? Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities.

Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities.

How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download.

Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information.

Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Digital Signal Processing Mitra 4th Edition Solution Manual :

trending ai seo tools for beginners for creators

easy gut health foods for moms for workers 870

best sleep hygiene tips for students for workers

why ai writing assistant for beginners for creators

beginner friendly minimalist lifestyle usa for students 90

what is minimalist lifestyle usa for students 471

simple index fund investing for moms for experts

best way to pilates for beginners for students for workers 636

how to start sleep hygiene tips for beginners for experts

best us national parks for moms for students

beginner friendly budgeting tips for moms for experts

top method for ai writing assistant full tutorial for students

how to use budgeting tips ideas for experts

how to use blog post ideas for moms for students

beginner friendly sleep hygiene tips for small business for students

Digital Signal Processing Mitra 4th Edition Solution Manual :

cartoon cute animals how to draw the most irresistible creatures - Oct 05 2022

web jun 6 2012 amazon com cartoon cute animals how to draw the most irresistible creatures on the planet christopher hart s cartooning ebook hart christopher kindle store

cartoon cute animals how to draw the most irresistible creatures - Dec 27 2021

web aug 17 2021 cartoon cute animals how to draw the most irresistible creatures on the planet hart christopher 1957 free download borrow and streaming internet archive

how to draw a cartoon animal step by step youtube - Jun 01 2022

web how to draw a cartoon animal step by step follow along and learn the tips and tricks for drawing cartoon animals giving them personality and making them cute

the cartoonist s big book of drawing animals christopher hart s - Jun 13 2023

web feb 19 2008 grade 2 6 in this follow up to how to draw cartoon animals watson guptill 1995 hart shows young artists how to draw an impressive array of creatures he includes many different animals such as bears penguins horses dogs and cats as well as a variety of breeds

you can draw cartoon animals a simple step by step drawing - Nov 06 2022

web in this personality packed drawing book best selling author christopher hart shows young artists how to bring zillions of cartoon animals to life using simple step by step instructions from playful puppies to zany zoo animals this book is crammed with an exciting variety of subjects to copy

how to draw cartoon animals hart christopher 1957 free - Aug 15 2023

web cartoon characters in art juvenile literature animals in art juvenile literature drawing technique juvenile literature cartoons and comics animals in art drawing technique publisher new york watson guptill publications collection

how to draw cartoon animals christopher hart s how to draw - Aug 03 2022

web following the basic shapes hart goes on to depict animal personalities that are based on their physical traits he covers many different species from exotic african beasts to common breeds of dogs and cats

how to draw a cartoon animal for beginners youtube - Jul 14 2023

web christopher hart 245k subscribers subscribe 4 8k views 4 years ago free how to draw fun stuff step by step christopher hart shows how to draw for free by following the easy steps in this

how to draw cartoon animals paperback 1 may 1995 - Dec 07 2022

web may 1 1995 because people can be amused by the human traits in animals they have been a source of humour for cartoonists this book teaches an easy method for capturing the forms and expressions of animals it begins by showing how to create simple drawings with just a few strokes of the pen

how to draw cartoon animals christopher hart google books - Jan 28 2022

web in his latest book christopher hart teaches an easy method for capturing the forms and expressions of animals the book begins by showing how to create simple drawings with just a few strokes

how to draw cartoon animals hart christopher - Feb 09 2023

web may 1 1995 following the basic shapes hart goes on to depict animal personalities that are based on their physical traits he covers many different species from exotic african beasts to common breeds of dogs and cats a final section shows how animals can be turned into human characters that stand upright and wear clothes

cartoon animal gifs get the best gif on giphy - Apr 30 2022

web explore and share the best cartoon animal gifs and most popular animated gifs here on giphy find funny gifs cute gifs reaction gifs and more

how to draw cartoon animals christopher hart google books - May 12 2023

web how to draw cartoon animals christopher hart watson guptill publications 1995 animals in art 144 pages because people are captivated by the human traits in animals especially

how to draw cartoon baby animals open library - Jul 02 2022

web dec 5 2022 how to draw cartoon baby animals by hart christopher 2000 watson guptill publications edition in english
[0 cartoon animals clip art royalty free gograph](#) - Mar 30 2022

web 900 cartoon animals clip art royalty free next 1 75 of 957 013 images cartoon animals stock photos cartoon animals
stock illustrations orientations toggle captions

how to draw cartoon animals by christopher hart paperback - Jan 08 2023

web may 1 1995 following the basic shapes hart goes on to depict animal personalities that are based on their physical
traits he covers many different species from exotic african beasts to common breeds of dogs and cats a final section shows
how animals can be turned into human characters that stand upright and wear clothes

how to draw cartoon animals with pictures wikihow - Feb 26 2022

web nov 9 2020 2 join three connected lines to the left edge of the oval 3 add another such irregular box attached at the
bottom of the above one for the jaw 4 draw another small circle at the far right for the back 5 create four small

[how to draw cartoon animals by christopher hart goodreads](#) - Sep 04 2022

web read 6 reviews from the world s largest community for readers because people are captivated by the human traits in
animals especially those that make u

[how to draw cartoon animals paperback may 1 1995](#) - Mar 10 2023

web may 1 1995 in his latest book christopher hart teaches an easy method for capturing the forms and expressions of
animals the book begins by showing how to create simple drawings with just a few strokes of the pen following the basic
shapes hart goes on to depict animal personalities that are based on their physical traits

how to draw cartoon animals christopher hart titles hart - Apr 11 2023

web how to draw cartoon animals christopher hart titles hart christopher amazon com tr kitap

alien periodic table pdf answers key worksheet and analysis - Oct 23 2023

web oct 13 2023 there are some metalloids that also exist in a periodic table of aliens ernst e sississ ss highho hi terriblum t
the element sississ is the metalloid with the highest atomic mass in the alien periodic table the metalloid which has the
lowest atomic mass in the alien periodic table is ernst e

alien periodic table pdf answers key worksheet and analysis - Oct 11 2022

web jul 16 2023 what the alien periodic round you can download alien periodic table pdf with answers key coming
predefined link lacking any virus

alien periodic table answers pdf4pro - Jun 07 2022

web alien periodic table answers an alien periodic table physical science an alien periodic table copyright prentice hall inc
the purpose of this 6 c c bisd303 org alien periodic chart materials periodic table notes on the periodic table pencil but most

a9r6fee tmp weebly can you

alien periodic table of elements worldbuilding stack exchange - Feb 15 2023

web may 3 2016 all non metal elements have between 1 8 electrons in their outermost cloud the ones on the far right of the periodic table have 8 the noble gasses with the exception of helium which has 2 and the far left have 1 the place on the rows descends as the number of inner electron shells increases

alien periodic table pdf answers key worksheet and analytics - Jul 08 2022

web jul 16 2023 one name off the noble gases is teeter wo bombal bo jeptum j and the next is logon l bombal is an element that is a noble gas but it does does contained the 8 valence electrons in its outermost shell of sum off these noble gas elements wobble has a greater atomic mass than other noble gas pitch explain through examples carbon

alien periodic table pdf answers key worksheet and analysis alien - Sep 22 2023

web mar 24 2023 scrutiny of the stranger regularly table worksheet answer key of alien periodically table conclusion some frequency asked questions such as alien periodic table periodic table of aliens answer react key answers pdf calculator activity etc

alien periodic table pdf answers key worksheet and analysis - Sep 10 2022

web mar 24 2023 you can download alien occasional table pdf with answers central from given link without any virus what is alien periodic table you can download alien periodic table pdf because answers key from give link with any contagion

alien periodic table analysis science classroom teacher - Nov 12 2022

web alien periodic table analysis name period fill in the missing words under what did you learn using the power point analyzing the alien periodic table

a l i e n p e r i o d i c t a b l e a c p s d - Apr 05 2022

web alien periodic table learning target i can predict the relative chemical properties of elements based on patterns of valence electrons and the periodic trends of electronegativity ionization energy electron affinity and atomic radius mission pdf dx g e nu a l chemical minds - Aug 21 2023

web answers to alien periodic table author is department created date 9 17 2013 4 09 43 pm

alien periodic table pdf answers key worksheet and analysis alien - May 06 2022

web jul 16 2023 the place away the quackzil in the alien periodic table is in the same period since the teetering element exotic periodic table aurora high school alien periodic table answers

classroom resources aliens activity aact - Jun 19 2023

web mar 25 2020 understand how the periodic table is organized by organizing drawings of aliens chemistry topics this lesson supports students understanding of periodic table trends of the periodic table time teacher preparation 10 minutes

lesson 1 class period materials for each group

[alien periodic table teacher haywood k12 nc us](#) - Dec 13 2022

web 1 each alien element symbol should be located in the same position that earth s corresponding element symbol would be located note the symbol is given in parentheses after the element s name 2 label the blank periodic table with each element s name and symbol 3 label the names of each of the groups 4 color code each of the

lab 3 alien periodic table lab 3 an alien periodic table - May 18 2023

web lab 3 an alien periodic table purpose to correctly place unknown elements in a blank periodic table given physical and chemical properties materials blank periodic table modified for this activity pencil list of observations on the unknown elements brain

an alien periodic table bemidji state university - Jan 14 2023

web since the alien scientists do not know the names of our elements they have radioed the following data on the known properties of the elements strangely but luckily there are no transition or rare earth elements on the alien planet this means that their periodic table consists of the a groups of elements the data are as follows i

an alien periodic table flashcards quizlet - Apr 17 2023

web which group is very reactive group 1 separates the metals from the non metals metalloids what is in the alkali metal group but is not an alkali metal hydrogen which group is the alkaline earth metals group 2 are alkaline

unlocking the secrets alien periodic table answers finally - Mar 04 2022

web discover the answers to questions about the alien periodic table and unravel the mysteries of the elements found in extraterrestrial materials explore the unique properties and compositions of these other worldly elements and learn about their potential implications for science and technology

alien periodic table pdf answers key worksheet and analysis - Aug 09 2022

web mar 24 2023 what is alien regular table you can download alien periodic table pdf with answers key from given link without any virus

[alien periodic table sas pdesas org](#) - Mar 16 2023

web s8 c 1 1 1 explain the differences among elements compounds and mixtures expand big ideas concepts competencies rationale vocabulary period a horizontal row of elements on the periodic table group elements in the same vertical column of the periodic table also called a family diatomic molecule consists of two atoms such as o 2 objectives

[alien periodic table pdf answers key worksheet and analysis](#) - Jul 20 2023

web mar 24 2023 the choice of the noble gases is wobble wo bombal bo jeptum j and the then is logon l bombal is an element that a noble gas but it does not contain the 8 valence electrons in its outermost shell of all of these noble gas

elements wobble has a greater infinitesimal mass than additional noble gas element

sg test papers free - May 01 2022

web sg test papers free is a free online singapore test papers website for primary school secondary school and junior college student can write the test paper anywhere with computer laptop or mobile device

free test papers 2020 free download the learning space sg - Aug 04 2022

web select your level below and download the free test papers you need now subjects offered english chinese higher chinese mathematics science select your papers subjects offered english chinese higher chinese mathematics additional mathematics physics biology chemistry history literature principles of accounting

2023 free test papers - Jul 03 2022

web our comprehensive selection of test papers is designed to help students prepare for their exams and achieve academic success with our user friendly platform you can easily browse and download the papers you need saving you time and effort

2022 free test papers primary secondary and jc - Mar 11 2023

web this site has a good collection of free downloadable test papers from popular primary schools secondary schools and jcs in singapore two continual assessments ca1 and ca2 and two semestral assessments sa1 and sa2 o

2023 free sg test papers primary jc secondary - Sep 05 2022

web test papers 2023 1 2022 p6 psle p5 p4 p3 p2 p1 papers now available free sg test papers worksheets singapore primary school test papers download now your child will excel in exams practice with test papers 2022 and worksheets for singapore primary school pupils 1 click download all papers feature is available

2023 download free test papers exam papers in singapore - Oct 06 2022

web free primary school test papers free secondary school test papers free jc test papers free ib test papers

secondary school free test papers download free exam papers - Dec 08 2022

web secondary school free test papers free exam papers for download primary secondary junior college ib secondary 1 sec 1 free test papers exam papers download one huge milestone for students would be entering their first year of secondary school

2023 free test papers - Apr 12 2023

web sep 14 2023 free test papers primary test papers 2022 p6 prelim papers 2022 p6 english prelim papers p6 maths prelim papers p6 science prelim papers p6 chinese prelim papers p6 higher chinese prelim papers p1 english p1 maths p1 chinese p2 english p2 maths p2 chinese p3 english p3 maths p3 science p3 chinese p3

download free exam papers and school test papers 2013 2023 - Jan 09 2023

web 1 free test paper resource in singapore we believe that all students should have easy access to high quality updated free

exam papers to aid them in their preparations and this simple luxury should remain free for all show more ready to start doing exam papers select your level below and download the free test papers you need now

where to download free exam papers tutor city - Feb 27 2022

web oct 2 2020 here s a comprehensive list of websites for you to download free top school exam papers in singapore 1 singapore exams singapore exam papers com if your child is a primary student this is one of the best websites from where free question papers of previous years can be obtained you may be wondering why

free exam papers for primary secondary school singapore - Feb 10 2023

web boost your exam preparation with our downloadable exam papers each past year exam paper is selected by our team of qualified teachers to help you prepare for the major full length exams under the primary and secondary curriculum of singapore as well as international exams such as the igcse

free secondary exam papers and school test papers download - Jun 14 2023

web download secondary school exam papers and free test papers by top sec schools by our best sec 1 5 tutors improve your o level results now

2023 free test papers in singapore all levels subjects 1 in - May 13 2023

web our test papers are all collated and curated from top schools such as raffles girls school methodist girls school rosyth school ai tong school cedar girls secondary school nanyang girls high school raffles institution hwa chong institution victoria junior college etc

aeis test details moe - Jan 29 2022

web test details the schedule for the aeis tests is as follows primary 2 3 test on thursday 14 september 2023 primary 4 5 test on thursday 14 september 2023 secondary 1 2 3 test on friday 15 september 2023 the test venue and reporting time will be stated in your child s entry proof they have to arrive by the reporting time and sit at

secondary school exam and test papers in singapore - Mar 31 2022

web with our comprehensive platform that covers all the main secondary school subjects your secondary schooler will have access to exam papers to help him excel in his schoolwork or exams set up a free account to access questions from past year secondary school exam papers in singapore today

free secondary school papers bestfreepapers com exam papers - Jun 02 2022

web free download of singapore top secondary school latest year exam prelim and test papers 2019 2018 math phy chem bio eng chi lit history geog

singapore past exam papers - Nov 07 2022

web toggle navigation sg past exam papers upload exam papers primary school exam papers filter level all pri 6 pri 5 pri 4

pri 3 pri 2 pri 1 subject all english maths science chinese higher chinese 2020 papers p6 english 16 p6 maths 15 p6 science 16 p6 chinese 15 p6 higher chinese 9

1 free secondary school test papers in singapore updated - Aug 16 2023

web download 100 free secondary school test papers from top schools in singapore latest sec 1 5 exam papers for all subjects o n levels

2021 secondary exam papers - Jul 15 2023

web sep 15 2023 2021 secondary exam papers jump to best collection of free downloadable 2008 to 2022 test papers ca1 sa1 ca2 sa2 from top schools in singapore some of the top school exam papers that you will be getting includes ai tong anglo chinese catholic high chij st nicholas girls christian brothers henry park

secondary school exam papers singapore - Dec 28 2021

web free secondary school exam papers free secondary 1 test papers free secondary 2 test papers free secondary 3 test papers free secondary 4 test papers free junior college test papers use a scientific method to identify topic pressure points exam paper questions are never random when you examine old test papers the same topics come