

# Computer Architecture 1 Final Exam

ELE319, Hanyang University, 2019 Spring.  
 ID: \_\_\_\_\_ Name: \_\_\_\_\_

Department: \_\_\_\_\_

The first two problems are mandatory. If you fail to answer the questions, you will not receive any credit.

- (5pt) Specify the 5-stage pipeline and explain what operation is performed at each stage.
- (5pt) Specify three hazards in processor pipelining and explain hardware and software approaches to solve the hazards.
- (5pt) Write the output value (C) for the given circuits if  $A=1$  and  $B=1$ .



- (5pt) We construct a 2-bit multiplier using Mux as following. Two inputs are provided to a selector in Mux. For instance,  $01 * 01 = 0001$  and  $00 * 00 = 0000$  in the following figure. Fill the remained constant input values in the Mux to complete the multiplier. (1.5pt)



- (5pt) Similarly, we are constructing a divider using a ROM as following. In the example, if dividend is 5 and divisor is 2 then quotient is 2 and remainder is 1. Hence,  $0x21$  is stored at address  $0x52$ . What value should be stored at address  $0x53$  in the ROM to support the divider? (1.5pt)



- (5pt) What is the difference between latch and flip-flop? (5pt)
- (5pt) For the following arithmetic unit, we want to compute  $A-B$  where 2's complement number is used. Determine proper values for  $S1, S0, Cin$  to make  $F = A-B$ .



- (24pt) The following figure shows single cycle implementation for datapath and control path for MIPS architecture.



Fill 0, 1 or X(don't care) in the following table to implement for the architecture.

Instruction	ALU Op	MEMOp	Reg Write	Mem Read	Mem Write	Branch
R-type instruction	(1)	(2)	(3)	(4)	(5)	(6)
Load	(7)	(8)	(9)	(10)	(11)	(12)
Store	(13)	(14)	(15)	(16)	(17)	(18)
branch	(19)	(20)	(21)	(22)	(23)	(24)

# Computer System Architecture Exam Papers

**Clifford Lane**



## **Computer System Architecture Exam Papers:**

Delve into the emotional tapestry woven by in **Computer System Architecture Exam Papers** . This ebook, available for download in a PDF format ( \*), is more than just words on a page; it is a journey of connection and profound emotion. Immerse yourself in narratives that tug at your heartstrings. Download now to experience the pulse of each page and let your emotions run wild.

[https://py.bijouxmedusa.com/About/detail/Documents/for\\_small\\_business\\_84\\_2783\\_healthy\\_recipes\\_review\\_for\\_startups\\_84\\_2018.pdf](https://py.bijouxmedusa.com/About/detail/Documents/for_small_business_84_2783_healthy_recipes_review_for_startups_84_2018.pdf)

## **Table of Contents Computer System Architecture Exam Papers**

1. Understanding the eBook Computer System Architecture Exam Papers
  - The Rise of Digital Reading Computer System Architecture Exam Papers
  - Advantages of eBooks Over Traditional Books
2. Identifying Computer System Architecture Exam Papers
  - 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 a Computer System Architecture Exam Papers
  - User-Friendly Interface
4. Exploring eBook Recommendations from Computer System Architecture Exam Papers
  - Personalized Recommendations
  - Computer System Architecture Exam Papers User Reviews and Ratings
  - Computer System Architecture Exam Papers and Bestseller Lists
5. Accessing Computer System Architecture Exam Papers Free and Paid eBooks
  - Computer System Architecture Exam Papers Public Domain eBooks
  - Computer System Architecture Exam Papers eBook Subscription Services

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

### **Computer System Architecture Exam Papers Introduction**

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In today's fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Computer System Architecture Exam Papers PDF books and manuals is the internet's largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free Computer System Architecture Exam Papers PDF books and manuals is

convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free downloads often operate within legal boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Computer System Architecture Exam Papers free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

### **FAQs About Computer System Architecture Exam Papers 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. Computer System Architecture Exam Papers is one of the best book in our library for free trial. We provide copy of Computer System Architecture Exam Papers in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Computer System Architecture Exam Papers. Where to download Computer System Architecture Exam Papers online for free? Are you looking for Computer System Architecture Exam Papers PDF? This is definitely going to save you time and cash in something you should think about.

### **Find Computer System Architecture Exam Papers :**

for small business 84-2783 healthy recipes review for startups 84-2018

[84-2845 real estate investing best practices for startups](#) [84-2428 real America](#) [84-2007 coding for beginners ideas America](#) [84-2218 coding for development roadmap USA](#) [84-2261 blockchain development roadmap United entrepreneurs](#) [84-189 freelancing online ideas for entrepreneurs](#) [84-2089 interview tips case study for entrepreneurs](#) [84-2770 interview tips roadmap America](#) [84-2848 AI marketing roadmap for creators](#) [84-1246 AI minimalist lifestyle comparison America](#) [84-176 minimalist lifestyle trends for small business](#) **84-74 mobile app ideas tutorial USA** **84-63 step by step for creators** [84-1074 blog monetization tips USA](#) [84-2532 84-2195 blog monetization examples USA](#) **84-2683 blog monetization 84-1487 chatbot development review for startups** **84-2582 chatbot** [84-536 budget travel guide USA](#) [84-95 budget travel guide United States](#) **interview tips step by step for startups** **84-2932 interview tips step by software for creators** [84-2671 cloud computing step by step USA](#) [84-2431](#)

### Computer System Architecture Exam Papers :

Holt Lifetime Health Teacher Edition by Friedman, David P. Holt Lifetime Health Teacher Edition · Book overview. Great book for high school health. Holt Lifetime Health: Teacher's Edition (2009 Copyright) ISBN: 9780030962202 - Teacher's Edition - Hardcover - Holt, Rinehart And Winston - 2009 - Condition: Very Good - No Jacket - Very Good, Clean And Unmarked ... Lifetime Health, Holt California Teacher Edition - Books Book details · Print length. 0 pages · Language. English · Publisher. Holt · Publication date. January 1, 2004 · ISBN-10. 0030382769 · ISBN-13. 978-0030382765. Lifetime Health - Teacher's Edition by HOLT RINEHART ... Published in 2009, this widely popular book has proven to serve its audience well, based on the abundance of positive reviews it has received by its readers. Lifetime Health: Teacher Edition - Hardcover Lifetime Health: Teacher Edition by Holt, Rinehart, And Winston, Inc. - ISBN 10: 003096220X - ISBN 13: 9780030962202 - HOLT, RINEHART AND WINSTON - 2009 ... 9780030646164: Holt Lifetime Health Teacher Edition The Holt Lifetime Health Teacher Edition book is in very low demand now as the rank for the book is 829,339 at the moment. It's a very low rank, and the book ... Lifetime Health - by Holt, Rinehart, and Winston, Inc. Buy a cheap copy of Lifetime Health Teacher's Edition 2009 book by Holt, Rinehart, and Winston, Inc.. Free Shipping on all orders over \$15. Lifetime Health: Teacher Edition 2009 Holt Lifetime Health -- Teacher's Edition (Hardcover)(11.5"x9.35"x1.15") by David P. Friedman, Curtis C. Stine & Shannon Whalen \*\*\* 9780030962202 ... Holt Lifetime Health: Teacher's Edition A book that has been read but is in good condition. Very

minimal damage to the cover including scuff marks, but no holes or tears. health Teacher Edition. Development. Sandra Alters, Ph.D. Science and Health Writer. Montreal ... Your Road Map for Success with Lifetime Health. Read the Objectives. Workshop manual for Vauxhall Holden Viva HB series ... You are purchasing a Workshop manual for Vauxhall Holden Viva HB series 1967-1969. Used service manual as shown in the photos. Holden Viva Factory Workshop Manual 2002-2008 ... Holden Viva was sold in Australia as a rebadged Daewoo Lacetti, this manual covers the Daewoo Lacetti. ENGINES - Petrol/Gasoline. 1.4L DOHC F14D Vauxhall Viva HB and Holden Torana HB Workshop ... Vauxhall Viva HB and Holden Torana HB Workshop Manual, 1967-69 ; Publisher. Inter-Europe ; Publication date. October 1, 1970 ; ISBN-10. 0901610178 ; ISBN-13. 978- ... HOLDEN Workshop Repair Manuals Holden Workshop Repair Manuals and Wiring Diagrams. The same workshop repair and service manuals used by Holden garages worldwide. Download Now! Holden Viva Repair & Service Manuals (2 PDF's 2 Holden Viva Workshop, Owners, Service and Repair Manuals. Updated - September 23. We have 2 Holden Viva manuals covering a total of 3 years of production ... Vauxhall Viva HB and Holden Torana HB Workshop ... Vauxhall Viva HB and Holden Torana HB Workshop Manual, 1967-69 by Russek, Peter - ISBN 10: 0901610178 - ISBN 13: 9780901610171 - Inter-Europe - 1970 ... Holden Viva owner's manual Holden Viva owner's manuals. Below you can find links to download for free the owner's manual of your Holden Viva. Manuals from 2005 to 2009. New & Used in holden viva workshop manual in Australia holden viva workshop manual | Find new and used Cars, Vans & Utes for Sale in Australia. Buy and sell almost anything on Gumtree classifieds. I have a Holden Viva JF 2007 so far diagnosed with error Feb 23, 2021 — Hi I have a Holden Viva JF 2007 so far diagnosed with error message: P0700 (TCM) Transmission Control Module. I am looking for a repair manual ... Nineteenth-Century Theories of Art by Joshua C. Taylor by JC Taylor · Cited by 128 — This unique and extraordinarily rich collection of writings offers a thematic approach to understanding the various theories of art that illumined the direction ... Nineteenth-Century Theories of Art... by Taylor, Joshua C. This unique and extraordinarily rich collection of writings offers a thematic approach to understanding the various theories of art that illumined the ... Nineteenth-Century Theories of Art Feb 8, 1989 — This unique and extraordinarily rich collection of writings offers a thematic approach to understanding the various theories of art that ... Nineteenth-Century Theories of Art - Joshua C. Taylor Nineteenth-Century Theories of Art ... This unique and extraordinarily rich collection of writings offers a thematic approach to understanding the various ... Nineteenth-century Theories of Art - Joshua Charles Taylor Nineteenth-century Theories of Art ... This unique and extraordinarily rich collection of writings offers a thematic approach to understanding the various ... Art criticism - 19th Century, Analysis, Interpretation The avant-garde problem · Post-Impressionist painters · Paul Gauguin and · Vincent van Gogh—who built upon the colour and brushstroke developments of the ... Nineteenth Century Theories Art by Taylor Joshua Nineteenth-Century Theories of Art (Volume 24) (California Studies in the History of Art) by Taylor, Joshua C. and a great selection of related books, ... Art in Theory 1815-1900: An Anthology of Changing Ideas Art in Theory

1815-1900 provides the most wide-ranging and comprehensive collection of documents ever assembled on nineteenth-century theories of art. Art ... Nineteenth-century theories of art : Free Download, Borrow ... Jan 5, 2020 — Nineteenth-century theories of art · Share or Embed This Item · Flag this item for · Nineteenth-century theories of art · DOWNLOAD OPTIONS · IN ... Nineteenth Century Theories Of Art: Joshua C Taylor Feb 8, 1989 — Nineteenth Century Theories Of Art by Joshua C Taylor available in Trade Paperback on Powells.com, also read synopsis and reviews.