

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012

Subject code: 171903

Date: 01/01/2013

Subject Name: Computer Integrated Manufacturing

Time: 10.30 am - 01.00 pm

Total Marks: 70

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- | | | | |
|------------|-----------|--|-----------|
| Q.1 | (a) | What are the basic components of numerical control system Draw and discuss function of each component. | 04 |
| | (b) | Explain the term "Work Volume "with respect to robots. | 03 |
| | (c) | Enlist benefits of flexible manufacturing system. | 03 |
| | (d) | Process rationalization and standardization is a benefit derived from CAPP. Explain. | 04 |
| Q.2 | (a) | Why is part classification and coding required in GT. Explain OPTIZ system of coding. | 07 |
| | (b) | Explain with neat sketch AS/RS system used in FMS | 07 |
| | OR | | |
| | (b) | Explain the types of flexibilities in FMS and discuss the factors on which these flexibilities depend. | 07 |
| Q.3 | (a) | List the various models of CIM. Explain anyone in detail. | 07 |
| | (b) | Explain with neat diagram retrieval type CAPP. | 07 |
| | OR | | |
| Q.3 | (a) | What is CIM. Discuss the components of CIM. | 07 |
| | (b) | Explain with neat diagram generative type CAPP. | 07 |
| Q.4 | (a) | Draw neat sketches and explain various robot configurations. | 07 |
| | (b) | Discuss various applications of robots. | 07 |
| | OR | | |
| Q.4 | (a) | Explain the commonly used robot programming languages giving examples. | 07 |
| Q.4 | (b) | Draw a vertically articulated robot. Explain its working showing work envelope, degree of freedom and discuss its applications. | 07 |
| Q.5 | (a) | What are canned cycles? What is the difference between a canned cycle and subroutine ? Discuss how a canned cycle can be useful in writing a part program. | 07 |
| | (b) | Write a part program for component shown in Figure.1. | 07 |
| | OR | | |
| Q.5 | (a) | What are the different geometric statements used to write part program using APT? Discuss each statement with a suitable example | 07 |
| | (b) | Explain with the help of part programming , the concept of subroutine and do loops for programming the component shown in Figure.2 | 07 |

Computer Integrated Manufacturing Exam Cheat Sheet

O. Ray Whittington



Computer Integrated Manufacturing Exam Cheat Sheet:

Computer-Integrated Engineering Design and Manufacture Wilson R Nyemba, 2025-10-21 This book presents advanced concepts of computer aided design and computer aided manufacture through modelling and computer numerical control coupled with the simulation of production systems It dwells on the subtle and key features such as the applications and effective use of dynamic blocks in modelling subtractive and additive layer manufacturing flexible manufacturing systems and automation and robotics The text Discusses the principles of computer aided design in a comprehensive manner and applications of the AutoCAD interface programming language Covers aspects of product development and design together with accompanying principles of design for manufacture and assembly Explains the integrated approach to design and manufacture enhanced by modelling simulation and analysis software with capabilities for electronic transfer and interchange between the software packages Presents process planning and part programming with MasterCAM generating toolpaths and selecting machine tools for subtractive manufacturing and step by step worked examples to enhance the understanding of principles and concepts of engineering design and manufacture Explores sequential control and logical sequencing configuration of industrial robots and challenges in programming robots The integrated nature of this book and the examples therein are intended for senior undergraduates graduate students academic researchers and practising engineers in various fields of engineering such as but not limited to aeronautical civil electrical industrial manufacturing mechanical mechatronics and production engineering

CIM Computer Integrated Manufacturing August-Wilhelm Scheer, 2012-12-06 Computer Integrated Manufacturing CIM is the computerized handling of integrated business processes among all different functions in an enterprise The consistent application of information technology along with modern manufacturing techniques and new organizational procedures opens up great potential for speeding up processes This book discusses the current state of applications and new demands arising from the integration principle It mainly emphasizes on strategies for realization and implementation based on the author s concrete experience The Y CIM information management model is presented as a procedural method for implementing CIM The third edition has been supplemented by up to date specified examples of applied CIM solutions and transfer strategies

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Wiley CPAexcel Exam Review 2015 Study Guide July O. Ray Whittington, 2015-06-22 The Business Environment and Concepts Volume of the Wiley CPA Examination Study Guides arms readers with detailed outlines and study guidelines plus skill building problems and solutions that help the CPA candidates identify focus on and master the specific topics that need the most work Many of

the practice questions are taken from previous exams and care was taken to ensure that they cover all the information candidates need to master in order to pass the new computerized Uniform CPA Examination

CEH v12 Certified Ethical Hacker Study Guide with 750 Practice Test Questions Ric Messier, 2023-04-12 The latest version of the official study guide for the in demand CEH certification now with 750 Practice Test Questions Information security and personal privacy remains a growing concern for businesses in every sector And even as the number of certifications increases the Certified Ethical Hacker Version 12 CEH v12 maintains its place as one of the most sought after and in demand credentials in the industry In CEH v12 Certified Ethical Hacker Study Guide with 750 Practice Test Questions you ll find a comprehensive overview of the CEH certification requirements Concise and easy to follow instructions are combined with intuitive organization that allows you to learn each exam objective in your own time and at your own pace The Study Guide now contains more end of chapter review questions and more online practice tests This combines the value from the previous two book set including a practice test book into a more valuable Study Guide The book offers thorough and robust coverage of every relevant topic as well as challenging chapter review questions even more end of chapter review questions to validate your knowledge and Exam Essentials a key feature that identifies important areas for study There are also twice as many online practice tests included You ll learn about common attack practices like reconnaissance and scanning intrusion detection DoS attacks buffer overflows wireless attacks mobile attacks Internet of Things vulnerabilities and more It also provides Practical hands on exercises that reinforce vital real world job skills and exam competencies Essential guidance for a certification that meets the requirements of the Department of Defense 8570 Directive for Information Assurance positions Complimentary access to the Sybex online learning center complete with chapter review questions full length practice exams hundreds of electronic flashcards and a glossary of key terms The CEH v12 Certified Ethical Hacker Study Guide with 750 Practice Test Questions is your go to official resource to prep for the challenging CEH v12 exam and a new career in information security and privacy

Computer Integrated Manufacturing Roger G. Hannam, 1996 An introductory text to CIM in both its engineering and management context It shows how modern concepts can be related within an integrated environment Features include CAD CAM data communications networks case studies and a bibliography glossary

CIMA Exam Practice Kit Management Accounting Performance Evaluation Paper P1 Ian Barnett, Simon Dawkins, 2006 No further information has been provided for this title

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Table of Contents Computer Integrated Manufacturing Exam Cheat Sheet

1. Understanding the eBook Computer Integrated Manufacturing Exam Cheat Sheet
 - The Rise of Digital Reading Computer Integrated Manufacturing Exam Cheat Sheet
 - Advantages of eBooks Over Traditional Books
2. Identifying Computer Integrated Manufacturing Exam Cheat Sheet
 - 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 Computer Integrated Manufacturing Exam Cheat Sheet
 - User-Friendly Interface
4. Exploring eBook Recommendations from Computer Integrated Manufacturing Exam Cheat Sheet
 - Personalized Recommendations
 - Computer Integrated Manufacturing Exam Cheat Sheet User Reviews and Ratings
 - Computer Integrated Manufacturing Exam Cheat Sheet and Bestseller Lists
5. Accessing Computer Integrated Manufacturing Exam Cheat Sheet Free and Paid eBooks
 - Computer Integrated Manufacturing Exam Cheat Sheet Public Domain eBooks
 - Computer Integrated Manufacturing Exam Cheat Sheet eBook Subscription Services
 - Computer Integrated Manufacturing Exam Cheat Sheet Budget-Friendly Options
6. Navigating Computer Integrated Manufacturing Exam Cheat Sheet eBook Formats
 - ePub, PDF, MOBI, and More
 - Computer Integrated Manufacturing Exam Cheat Sheet Compatibility with Devices
 - Computer Integrated Manufacturing Exam Cheat Sheet Enhanced eBook Features
7. Enhancing Your Reading Experience

- Adjustable Fonts and Text Sizes of Computer Integrated Manufacturing Exam Cheat Sheet
- Highlighting and Note-Taking Computer Integrated Manufacturing Exam Cheat Sheet
- Interactive Elements Computer Integrated Manufacturing Exam Cheat Sheet
- 8. Staying Engaged with Computer Integrated Manufacturing Exam Cheat Sheet
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Computer Integrated Manufacturing Exam Cheat Sheet
- 9. Balancing eBooks and Physical Books Computer Integrated Manufacturing Exam Cheat Sheet
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Computer Integrated Manufacturing Exam Cheat Sheet
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Computer Integrated Manufacturing Exam Cheat Sheet
 - Setting Reading Goals Computer Integrated Manufacturing Exam Cheat Sheet
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Computer Integrated Manufacturing Exam Cheat Sheet
 - Fact-Checking eBook Content of Computer Integrated Manufacturing Exam Cheat Sheet
 - 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

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