

# Nace Cathodic Protection 3 Exams Document

**nace cathodic protection 3 exams** are a crucial milestone for professionals aiming to demonstrate their expertise in the field of corrosion control, specifically in the design, installation, testing, and maintenance of cathodic protection systems. These exams are part of the certification process offered by the National Association of Corrosion Engineers (NACE), which is recognized globally as a leading authority in corrosion engineering and related disciplines. Successfully passing the NACE Cathodic Protection Level 3 exam signifies a high level of technical knowledge and practical competence, opening doors to advanced career opportunities in industries such as oil and gas, pipelines, marine, and infrastructure.

In this comprehensive guide, we will explore everything you need to know about the NACE Cathodic Protection 3 exams, including prerequisites, exam structure, preparation strategies, key topics, and tips for success. Whether you are a seasoned corrosion technician or an engineer looking to elevate your credentials, understanding the intricacies of the NACE CP Level 3 exam is essential for achieving certification and advancing your professional journey.

## Understanding the NACE Cathodic Protection 3 Exams

### What is the NACE CP Level 3 Certification?

The NACE CP Level 3 certification is designed for professionals who have extensive experience in cathodic protection systems. It validates their ability to design, evaluate, and troubleshoot complex corrosion control systems to ensure the longevity and safety of critical infrastructure. The certification confirms that the individual possesses a comprehensive understanding of cathodic protection principles, testing procedures, and industry standards.

### Who Should Consider Taking the Exam?

The NACE CP Level 3 exam is suitable for:

- Experienced corrosion technicians and engineers.
- Personnel involved in the design, installation, and maintenance of cathodic protection systems.
- Professionals seeking to demonstrate advanced knowledge and leadership in corrosion control.
- Individuals aiming to meet regulatory or project-specific requirements for certification.

### Prerequisites for the NACE CP Level 3 Exam

Candidates typically need to fulfill certain prerequisites before attempting the Level 3 exam, including:

- Holding a NACE CP Level 2 certification or equivalent.
- Accumulating several years of practical experience in cathodic protection systems.
- Completing relevant training courses or workshops recommended by NACE.
- Demonstrating familiarity with industry standards such as NACE SP0169, NACE SP0502, and others.

## **Exam Structure and Content**

### **Format of the NACE CP Level 3 Exam**

The exam typically consists of:

- Multiple-choice questions designed to assess theoretical knowledge.
- Open-ended or essay questions requiring detailed technical responses.
- Practical problem-solving scenarios.

The duration of the exam usually ranges from 4 to 6 hours, depending on the testing center and specific requirements.

### **Key Topics Covered**

The content of the NACE CP Level 3 exam encompasses a broad range of topics, including but not limited to:

- Advanced cathodic protection principles and theories.
- Design criteria for impressed current and sacrificial anode systems.
- Evaluation and interpretation of CP system test data.
- Corrosion mechanisms and mitigation strategies.
- Industry standards and codes applicable to CP systems.
- Environmental factors affecting cathodic protection performance.
- Inspection, troubleshooting, and maintenance procedures.
- Documentation, reporting, and quality assurance processes.

## **Preparation Strategies for the NACE CP Level 3 Exam**

## Developing a Study Plan

A well-structured study plan is essential for success. Consider the following steps:

- Review the official NACE Body of Knowledge and exam outline.
- Gather recommended textbooks, industry standards, and technical papers.
- Allocate regular study sessions over several months leading up to the exam.
- Focus on weak areas identified during practice tests.

## Utilizing Study Materials and Resources

Effective resources include:

- NACE publications such as SP0169, SP0502, and other standards.
- Online courses and webinars tailored for CP Level 3 preparation.
- Practice exams and sample questions to familiarize with the exam format.
- Technical manuals, textbooks, and industry articles.

## Engaging in Practical Experience

Hands-on experience is invaluable:

- Participate in field testing, troubleshooting, and system design.
- Work under the mentorship of certified professionals.
- Document your experiences to better understand real-world applications.

## Joining Study Groups and Forums

Collaborative learning can enhance understanding:

- Join NACE chapters or online forums dedicated to corrosion control.
- Discuss challenging topics with peers and mentors.
- Share resources and insights to broaden your perspective.

## Tips for Passing the NACE Cathodic Protection 3 Exams

### Understand the Exam Questions Thoroughly

Carefully read each question, noting keywords and what is specifically being asked. For scenario-based questions, identify the core problem before choosing your response.

## **Manage Your Time Effectively**

Allocate time to each section and question, ensuring you have sufficient time to review your answers before submitting.

## **Practice Under Exam Conditions**

Simulate exam scenarios by timing practice tests. This helps build stamina and reduces anxiety during the actual exam.

## **Focus on Industry Standards and Best Practices**

Ensure you are familiar with current standards, codes, and best practices, as these are often tested.

## **Review Your Work Carefully**

If time permits, revisit your answers to check for errors or omissions.

## **After the Exam: Certification and Career Advancement**

### **Receiving Your Certification**

Upon successful completion of the exam, candidates receive the NACE CP Level 3 certification, which is valid for a specified period, often three years, after which recertification may be required.

### **Maintaining Certification**

To retain certification:

- Engage in continuing education.
- Participate in industry seminars, workshops, or courses.
- Accumulate relevant work experience.

### **Career Opportunities with NACE CP Level 3 Certification**

Achieving Level 3 certification can lead to:

- Senior corrosion engineer or technician roles.
- Project management positions.
- Consulting opportunities in corrosion control.
- Leadership roles in industry organizations or standards committees.

## Conclusion

The NACE Cathodic Protection 3 exams represent a significant step toward establishing yourself as a highly qualified expert in corrosion prevention and cathodic protection systems. Preparing thoroughly by understanding the exam structure, mastering key topics, and gaining practical experience will enhance your chances of success. Remember that certification not only validates your skills but also elevates your professional credibility, opening doors to new opportunities and leadership roles across various industries. Dedication, strategic study, and hands-on practice are the keys to conquering the NACE CP Level 3 exam and advancing your career in corrosion engineering.

### NACE Cathodic Protection 3 Exams: A Comprehensive Review

#### Introduction to NACE Cathodic Protection 3 Exams

The NACE Cathodic Protection 3 Exams are a critical milestone for professionals seeking advanced certification in the field of corrosion control, specifically in the area of cathodic protection (CP). These exams are designed to assess the knowledge, practical skills, and application abilities of engineers, technicians, and inspectors involved in designing, installing, and maintaining cathodic protection systems for various infrastructure assets, including pipelines, storage tanks, ships, and offshore structures.

NACE International (National Association of Corrosion Engineers) is the globally recognized authority for corrosion control standards and certifications. Their CP exams are structured into multiple levels, with CP 3 representing a high-tier certification that signifies expertise in complex CP design, troubleshooting, and system evaluation. Successfully passing the CP 3 exams opens doors for professionals to engage in high-level consultancy, engineering design, and leadership roles in corrosion prevention projects.

#### Overview of the NACE CP 3 Certification

##### Purpose and Significance

The CP 3 certification aims to validate a candidate's ability to:

- Design and evaluate complex cathodic protection systems.
- Troubleshoot and resolve advanced CP system issues.
- Conduct detailed assessments and inspections.
- Lead corrosion control projects with a high degree of technical competence.

Achieving CP 3 status demonstrates mastery over both theoretical principles and practical applications, positioning professionals as industry leaders in corrosion management.

### Prerequisites and Eligibility

Before attempting the CP 3 exams, candidates typically need:

- CP 2 Certification: Proven experience and certification at the intermediate level.
- Experience: Usually 3-5 years in corrosion control, with specific exposure to CP design, installation, and maintenance.
- Educational Background: A background in engineering, materials science, or a related technical field is highly recommended.
- Training: Completion of NACE-approved training courses relevant to CP system design and troubleshooting.

### Exam Components

The CP 3 exam generally comprises:

- Written Examination: Multiple-choice questions, problem-solving scenarios, and technical questions covering all aspects of CP.
- Practical/Field Assessment: Demonstration of field skills in evaluating existing CP systems, performing measurements, and troubleshooting.

### Deep Dive into the Exam Content

#### Theoretical Knowledge Areas

The CP 3 exam tests a broad spectrum of knowledge areas, including:

- Electrochemical Principles: Understanding of galvanic vs. impressed current systems, potential measurements, and current distribution.
- Material Compatibility: Knowledge of materials used in CP systems and their corrosion behavior.

- Design Calculations: Ability to perform complex calculations related to system sizing, anode consumption, and protective potentials.
- Standards and Codes: Familiarity with NACE standards (e.g., SP0177, SP0178, SP0169) and industry best practices.

### Practical Skills Evaluation

Candidates are assessed on their ability to:

- Assess Existing Systems: Interpret data from potential surveys, rectifier readings, and interference testing.
- Troubleshoot Systems: Identify issues such as stray currents, coating failures, or incorrect system configurations.
- Design Solutions: Develop plans for system upgrades, retrofits, or new installations ensuring compliance and effectiveness.
- Documentation & Reporting: Prepare detailed reports, diagrams, and recommendations based on field assessments.

### Preparation Strategies for NACE CP 3 Exams

#### Study Resources

Candidates should leverage a combination of resources:

- NACE Study Guides: Official materials that outline exam content and sample questions.
- Reference Standards: Familiarity with NACE standards, including their application and interpretation.
- Technical Literature: Textbooks on cathodic protection, electrochemistry, and corrosion engineering.
- Training Courses: Enroll in specialized training programs offered by NACE or accredited providers.

#### Study Tips

- Create a Study Plan: Allocate dedicated time for each knowledge area, emphasizing weak points.
- Practice Problem-Solving: Use sample questions and case studies to simulate exam conditions.
- Field Experience: Gain hands-on experience through field assessments and projects.

- Join Study Groups: Collaborate with peers to discuss complex topics and share insights.
- Review Standards Regularly: Keep updated with the latest revisions and industry practices.

### Exam Day Tips and Best Practices

- Arrive Prepared: Bring necessary identification, calculators, and any permitted reference materials.
- Time Management: Allocate time to each section, leaving buffer time for review.
- Read Questions Carefully: Understand what is being asked before answering.
- Show Your Work: Clearly document calculations and reasoning in problem-solving questions.
- Stay Calm and Focused: Maintain composure to think critically and avoid mistakes.

### Post-Exam Process and Certification

#### Results and Certification

- Notification Timeline: Results are typically communicated within a few weeks post-examination.
- Certification Validity: The CP 3 certification is valid for a set period (often 3-5 years) and requires recertification or continuing education.
- Renewal Requirements: Engage in ongoing professional development, participate in industry seminars, and stay current with standards.

#### Career Impact

Holding a NACE CP 3 certification significantly enhances a professional's credibility and marketability. It qualifies individuals for:

- Senior corrosion engineer roles.
- CP system design and evaluation specialist positions.
- Project management and consulting in corrosion control.
- Leadership roles in large-scale infrastructure projects.

#### Challenges and Common Difficulties

While the CP 3 exams are rigorous, candidates often face challenges such as:

- Complex Problem-Solving: Advanced calculations and troubleshooting scenarios require deep



understanding.

- Standard Interpretation: Navigating industry standards and applying them correctly can be demanding.
- Field Experience: Insufficient real-world exposure may hinder practical assessment performance.
- Time Pressure: Managing exam time effectively, especially during case-based questions.

To overcome these, comprehensive preparation and practical experience are essential.

## Industry Trends and Future Outlook

The field of cathodic protection continues to evolve with emerging technologies, such as:

- Smart Monitoring Systems: Integration of IoT devices for real-time system evaluation.
- Advanced Materials: Development of more durable anodes and coatings.
- Regulatory Changes: Updates to standards and compliance requirements.

Professionals with CP 3 certification will be vital in implementing innovative solutions, ensuring infrastructure longevity, and maintaining safety standards.

## Conclusion: Why NACE CP 3 Exams Matter

The NACE Cathodic Protection 3 Exams are a benchmark of expertise, demanding a comprehensive understanding of both the science and engineering of corrosion prevention. Successfully navigating these exams signifies a professional's capability to handle complex systems, lead projects, and influence industry best practices. As infrastructure continues to grow in complexity and importance, the value of CP 3 certification will only increase, making it a worthwhile pursuit for dedicated corrosion control specialists seeking to elevate their careers.

Embarking on the journey to achieve NACE CP 3 certification requires dedication, rigorous study, and practical experience. However, the rewards—enhanced knowledge, career advancement, and recognition as an industry expert—are well worth the effort.

**Question** What topics are covered in the NACE Cathodic Protection 3 exams? The NACE Cathodic Protection 3 exams cover advanced topics such as criteria for impressed current systems, polarization and potential measurement techniques, troubleshooting, system design, and standards related to cathodic protection systems. **Answer** How can I best prepare for the NACE CP 3 exams? Preparation includes reviewing the NACE standards and manuals, taking practice exams, gaining hands-on experience with cathodic protection systems, and attending prep courses specifically designed for the CP 3 certification. What is the passing score for the NACE Cathodic Protection 3

exam? The minimum passing score for the NACE CP 3 exam is typically 70%, but candidates should verify the current requirements on the official NACE website as standards may change. Are there any prerequisites for taking the NACE Cathodic Protection 3 exam? Yes, candidates must generally hold the NACE CP 2 certification and have relevant field experience in cathodic protection systems before qualifying to take the CP 3 exam. How often is the NACE Cathodic Protection 3 certification valid, and what are the recertification requirements? The NACE CP 3 certification is typically valid for 3 years, after which recertification is required. Recertification involves completing continuing education, retaking the exam, or accumulating qualifying work experience, as outlined by NACE standards.

**Related keywords:** NACE cathodic protection certification, cathodic protection exam prep, NACE CP certification, cathodic protection technician exam, NACE corrosion certification, cathodic protection training, NACE CP exam requirements, cathodic protection certification process, NACE corrosion prevention exams, cathodic protection certification prep

## Adms 3585 past exams

**adms 3585 past exams** are an invaluable resource for students aiming to excel in their coursework and assessments. Accessing and reviewing past exams can significantly enhance your understanding of the course material, improve your exam-taking strategies, and boost your confidence for upcoming tests. Whether you are preparing for a final exam, a mid-term, or simply seeking to review key concepts, leveraging past exams is a strategic approach to academic success. In this comprehensive guide, we will explore the importance of adms 3585 past exams, how to find them, effective study strategies, and tips for making the most of these resources.

## Understanding the Importance of adms 3585 Past Exams

### Why Use Past Exams?

Past exams serve multiple purposes in your learning journey:

- **Familiarization with Exam Format:** They help you understand the structure of the exam, including question types, formatting, and time allocation.
- **Identifying Key Topics:** Reviewing questions from previous exams reveals recurring themes and essential topics emphasized by instructors.
- **Assessing Your Knowledge:** Practice with past exams allows you to test your understanding and identify areas needing improvement.

- **Building Exam Confidence:** Familiarity with exam conditions reduces anxiety and increases confidence during the actual test.

## Legal and Ethical Considerations

When using adms 3585 past exams, ensure you:

- Access them through legitimate channels such as official university repositories or authorized student resources.
- Avoid sharing or distributing exams that are not meant for public use.
- Use past exams solely for study purposes and not for academic dishonesty.

## How to Find adms 3585 Past Exams

### Official University Resources

Most universities provide access to past exams through their official channels:

- **Learning Management Systems (LMS):** Platforms like Canvas, Blackboard, or Moodle often host past exam archives or study resources.
- **Library Archives:** University libraries frequently maintain collections of past exams accessible to enrolled students.
- **Department Websites:** The department offering adms 3585 may publish sample exams or past papers for student use.

### Student Networks and Study Groups

Collaborate with peers who may share their own collections of past exams. Consider:

- Joining student forums and online groups dedicated to your course.
- Participating in study groups where members exchange resources.

### Online Resources and Forums

Some educational websites and forums host collections of past exams. When using these:

- Verify the authenticity and relevance to your specific course offering.

- Use reputable sites to avoid outdated or incorrect materials.

## Effective Strategies for Using adms 3585 Past Exams

### Creating a Study Plan

Develop a structured approach:

- Gather all available past exams and organize them chronologically or thematically.
- Set specific goals for each study session, such as mastering a particular topic or practicing a set number of questions.
- Allocate time for review and reflection after completing each exam.

### Practicing Under Exam Conditions

Simulate real exam settings to improve time management and focus:

- Set a timer matching the actual exam duration.
- Find a quiet space free from distractions.
- Attempt past exams without referring to notes or textbooks to test your knowledge.

### Analyzing Your Performance

After completing each practice exam:

- Review your answers critically to identify mistakes.
- Note recurring errors or difficult questions.
- Adjust your study plan to focus on weaker areas.

### Integrating Past Exams Into Your Study Routine

Use past exams as part of a broader study strategy:

- Combine practice exams with reviewing lecture notes, textbooks, and supplementary materials.
- Utilize flashcards or summaries to reinforce key concepts identified during practice.
- Seek feedback from instructors or tutors on practice answers if possible.

## Additional Tips for Success with adms 3585 Past Exams

- **Stay Consistent:** Regular practice with past exams leads to gradual improvement.
- **Focus on Understanding:** Don't just memorize answers; aim to understand the reasoning behind them.
- **Update Your Resources:** Use the most recent exams to ensure relevance with current course content.
- **Balance Practice and Learning:** Use exams to identify gaps, then revisit lectures and readings to fill those gaps.
- **Maintain Academic Integrity:** Use past exams ethically to enhance your learning and avoid misconduct.

## Conclusion

adms 3585 past exams are a cornerstone resource for students seeking to excel in their coursework. They offer insights into exam structure, highlight key topics, and provide an excellent platform for practicing and refining your knowledge. By accessing these exams through official channels, employing strategic study methods, and maintaining a disciplined approach, you can maximize their benefits and approach your exams with confidence. Remember, success in academic assessments is not just about working hard but also working smart?leveraging past exams effectively is a smart strategy that can make a significant difference in your academic performance.

### adms 3585 past exams: An In-Depth Analysis for Academic Success

In the competitive landscape of academic courses, students often seek comprehensive resources to enhance their understanding and performance. For students enrolled in adms 3585, a course that likely encompasses complex management, organizational theory, or related topics, access to past exams can be invaluable. This article offers a detailed investigation into adms 3585 past exams, exploring their availability, structure, relevance, and how students can leverage them effectively for exam preparation.

## Understanding the Significance of Past Exams in adms 3585

### Why Are Past Exams Crucial for Students?

Past exams serve as a mirror reflecting the instructor's expectations, exam format, and core content areas. They allow students to:

- Identify recurring themes and topics: Recognizing patterns in questions helps focus study efforts on high-yield material.
- Familiarize with exam structure: Understanding question types, formats, and time constraints reduces exam-day anxiety.
- Assess their knowledge: Practice exams enable students to gauge their readiness and pinpoint areas needing improvement.
- Develop effective exam strategies: Repeated exposure to past questions fosters better time management and answer formulation.

## The Role of Past Exams in Mastering adms 3585

In courses like adms 3585, which may involve complex case analyses, theoretical applications, or quantitative reasoning, practicing with past exams can:

- Clarify the depth and breadth of knowledge expected.
- Enhance critical thinking and problem-solving skills pertinent to management scenarios.
- Build confidence by simulating actual exam conditions.

## Availability and Accessibility of adms 3585 Past Exams

### Sources of Past Exams

Access to past exams depends heavily on institutional policies, instructor sharing practices, and student networks. Common sources include:

- Course Websites or Learning Management Systems (LMS): Platforms like Blackboard, Canvas, or Moodle often host shared resources.
- Departmental Archives: Some university departments maintain repositories of old exams for student use.
- Student Forums and Study Groups: Peer networks may exchange practice exams or quiz questions.
- Professors and Teaching Assistants: Occasionally, instructors provide sample questions or previous tests upon request.

## Challenges in Accessing Past Exams

Despite their value, students may face obstacles such as:

- Limited availability: Not all instructors release past exams to prevent rote memorization.
- Copyright restrictions: Institutional policies may restrict sharing older exams.
- Inconsistent formats: Variability in exam versions can complicate preparation.

## Strategies to Obtain Past Exams

Students aiming to secure adms 3585 past exams can adopt proactive approaches:

- Engage with course instructors early to request practice materials.
- Join online student groups dedicated to adms 3585.
- Attend review sessions where instructors often share sample questions.
- Utilize university libraries or archives that may store exam collections.

## Analyzing the Structure and Content of adms 3585 Past Exams

### Common Question Types

Based on typical management courses, past exams often feature a mix of:

- Multiple-choice questions: Testing factual recall and conceptual understanding.
- Short-answer questions: Requiring concise explanations of theories or case insights.
- Essay questions: Demanding in-depth analysis, synthesis, and critical evaluation.
- Case studies: Application of management principles to real-world scenarios.

### Key Topics Frequently Covered

Analysis of available past exams reveals recurring themes, such as:

- Organizational behavior and culture
- Leadership theories and styles
- Strategic management frameworks
- Decision-making processes
- Ethical considerations in management
- Change management strategies
- Conflict resolution techniques

This pattern indicates which areas students should prioritize in their studies.

## Exam Format and Time Management

Students should note:

- The typical duration of the exam.
- The proportion of multiple-choice versus essay questions.
- The allocation of marks per section.
- Common instructions regarding answer length and presentation.

Understanding these elements helps in devising effective time management strategies during the exam.

## Guidelines for Effectively Using Past Exams in adms 3585 Preparation

### Developing a Study Plan

To maximize the benefits of past exams, students should:

- Gather a comprehensive collection of past exams spanning multiple semesters.
- Categorize questions by topic and difficulty level.
- Create a study timetable that incorporates timed practice sessions.
- Simulate exam conditions by completing practice exams without interruptions.

### Practicing with Past Exams

- Start early: Regular practice helps reinforce learning.
- Focus on understanding: Rather than memorizing answers, analyze why specific responses are correct.
- Review and reflect: After each practice, identify errors and revisit relevant course materials.
- Seek feedback: Where possible, compare answers with instructor solutions or peer reviews.

### Supplementing Past Exams with Additional Resources

- Use lecture notes, textbooks, and scholarly articles to deepen understanding.
- Engage in study groups to discuss and analyze past exam questions.
- Attend review sessions for clarification of complex topics.



## Limitations and Ethical Considerations

While past exams are valuable, students should be aware of potential limitations:

- Not always reflective of current course content: Changes in curriculum might render older exams less relevant.
- Risk of over-reliance: Excessive focus on past exams may hinder genuine understanding.
- Academic integrity: Students must ensure they use past exams ethically, avoiding unauthorized sharing or copying.

Instructors often encourage students to use past exams as practice tools rather than as definitive study guides.

## Conclusion: Leveraging adms 3585 Past Exams for Academic Success

The diligent use of adms 3585 past exams can significantly enhance student preparedness, confidence, and performance. By understanding their structure, content, and strategic application, students can transform these resources into powerful study aids. However, success ultimately depends on a balanced approach?integrating past exam practice with comprehensive understanding, active engagement with course materials, and ethical study practices.

Aspiring students should proactively seek access, analyze patterns, and practice thoroughly while remaining mindful of the limitations. With strategic preparation, past exams can serve as a cornerstone of effective learning in adms 3585, guiding students toward academic excellence and a deeper mastery of management principles.

Disclaimer: This analysis is intended for educational purposes and does not endorse any specific exam content or sharing practices. Students should always adhere to their institution?s policies regarding exam materials.

**Question** Where can I find past exams for ADMS 3585 to prepare effectively? You can access past exams for ADMS 3585 through your university's online learning portal, course instructor's resources, or student study groups. Some universities also provide a dedicated repository or library archive for past exam papers. **Answer** How should I use ADMS 3585 past exams to improve my exam performance? Use past exams to familiarize yourself with the exam format, common question types, and key topics. Practice under timed conditions and review your answers to identify areas for improvement. Combining this with reviewing lecture materials enhances your understanding. Are ADMS 3585 past exams a good indicator of the current course content and difficulty? Yes, past exams can give a good sense of the course structure and question style, but

ensure you also stay updated with recent lectures and any syllabus changes. Professors may update content, so use them as a guide rather than an exact template. What are some effective strategies for studying ADMS 3585 using past exam questions? Break down past exams into sections, practice answering questions without notes, and review solutions thoroughly. Focus on understanding concepts rather than memorizing answers, and create summary notes for quick revision. Is it ethical to rely heavily on ADMS 3585 past exams during my study sessions? Using past exams as a study tool is generally ethical and encouraged for exam preparation. However, avoid relying solely on them; complement your practice with class notes, textbooks, and other learning resources to ensure comprehensive understanding.

**Related keywords:** adms 3585, past exams, ADMS 3585 solutions, ADMS 3585 practice exams, ADMS 3585 study materials, ADMS 3585 exam review, ADMS 3585 sample questions, ADMS 3585 exam prep, ADMS 3585 exam questions, ADMS 3585 university exams, ADMS 3585 course resources

**Read the full article online:** [Adms 3585 Past Exams](#)