



International Association for Radio, Telecommunications and Electromagnetics, Inc.  
840 Queen Street – New Bern, NC 28560 - 1-800-89-NARTE - Fax 1-252-672-0111 - [www.narte.org](http://www.narte.org)

## EMC Certification Application Package

---FORMS MAY BE PHOTOCOPIED---

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### About iNARTE EMC Certification

NARTE was established by industry leaders in 1982 in response to the FCC's deregulation and encouragement of industry certified personnel. As an objective third party certification body, NARTE developed an evaluation process based not only on examination, but real world skills and work experience. Early in 1987, it was determined that a credential certification process for EMC engineers and technicians was needed to help improve the quality of direct technical support to the Naval Air Systems Command (NAVAIR) and eventually to the U.S. Navy. In addition to improving the technical quality of support, and certification, as a recognized standard, provides a demonstrable benchmark to differentiate qualified EMC/EMI personnel.

In 2007 the NARTE name was changed to iNARTE to recognize our growing global membership. The purpose of the EMC Credential Certification Program is to foster technical "excellence" in EMC engineering. This approach establishes technical competency criteria for EMC and enforces these criteria for technical personnel performing EMI control work. The program benefits the individual engineer, the technician and the EMC community as a whole by establishing a standard of excellence in EMC engineering that will endure and extend across the boundaries of private and government agencies. iNARTE EMC Certification is a four-step process based on education, work experience, peer endorsement and examination. Educational requirements for engineers include graduation from an accredited four year curriculum in engineering. For technicians, education includes graduation from a trade or vocational school course in electronic technology. A number of years of direct work experience in the field is required of both engineers and technicians. Peer and supervisory endorsements are used to substantiate the credibility of the candidate. Examinations are confined to the area of EMC essentials. The target of the essential examination is to establish that a candidate has a broad knowledge in 26 specific areas. Detailed information regarding the EMC Examination is available on Pages 3 and 4 of this package.

Submission of the application form implies agreement to adhere to the **iNARTE Code of Ethics**, available from iNARTE HQ or online at <http://www.narte.org/h/codeofethics.asp>



## EMC ENGINEER Certification Criteria

1. Complete the EMC Application Form (Page 7) and submit a **non-refundable** application fee, available at <http://www.narte.org/h/fees.asp>. Submission of the application form implies agreement to adhere to the NARTE Code of Ethics. Available at: <http://www.narte.org/h/codeofethics.asp>
2. Provide specific record of nine years or more of experience in engineering work. Provide an up-to-date resume or complete the EMC Detailed Work History Form (Pages 8-9).
  - a) Graduation from an iNARTE-approved engineering curriculum of four years shall be considered equivalent to four years of such required experience.
  - b) The satisfactory completion of each year of such an approved engineering curriculum shall be considered equivalent to a year of such required experience.
  - c) Graduation in a physical science curriculum other than engineering will be evaluated by iNARTE.
  - d) Graduation from a college with a BSET in Engineering Technology (BSET) shall be considered as equivalent to two years of such required experience.
  - e) Graduation in a curriculum other than engineering or physical science will be evaluated by iNARTE.
  - f) Postgraduate study in engineering may be given credit up to one year.
  - g) Teaching: Engineering teaching of a character satisfactory to iNARTE shall be considered as experience not in excess of two years.  
No more than 5 years experience credit will be allowed for education and/or teaching as outlined above. The mere execution or the supervision of construction of such work as a foreman, first line supervisor or superintendent shall not be deemed to be the practice of engineering.
3. Provide evidence of education and training.  
Official school transcripts are required. Photocopies of applicable training certificates may be submitted.
4. References: Using the iNARTE reference forms (Pages 10-11), submit a minimum of 1 supervisory reference and 2 additional references each supporting character and competency as an EMC Engineer. Reference forms must be signed and forwarded directly to iNARTE.
5. Compose 10 multiple choice questions with correct answers and supporting references.
6. Pass the iNARTE EMC Engineer examination

## EMC TECHNICIAN Certification Criteria

1. Complete the EMC Application Form (Page 7) and submit a **non-refundable** application fee, available at <http://www.narte.org/h/fees.asp>. Submission of the application form implies agreement to adhere to the NARTE Code of Ethics. Available at: <http://www.narte.org/h/codeofethics.asp>.
2. Provide specific record of six years or more of experience in EMC technician work. Provide an up-to-date resume or complete the EMC Detailed Work History Form (Pages 8-9).
  - a) Graduation from an iNARTE-approved electronics technology curriculum of two years or U.S. Navy Class "A" school is considered equivalent to one year of required experience.
  - b) The satisfactory completion of each year of such an approved technician curriculum is considered equivalent to one year experience.
  - c) Graduation from other technician training programs will be evaluated by iNARTE.
  - d) Teaching: Engineering teaching of a character satisfactory to iNARTE may be considered as a maximum of two years experience.  
No more than 5 years experience credit will be allowed for education and/or teaching as outlined above. The mere execution or the supervision of construction of such work as a foreman, first line supervisor or superintendent shall not be deemed to be the practice of engineering.
3. Provide evidence of education and training.
4. Official school transcripts are required. Photocopies of applicable training certificates may be submitted.
5. References: Using the iNARTE reference forms (Pages 10-11), submit a minimum of 1 supervisory reference and 2 additional references each supporting character and competency as an EMC Technician. Reference forms must be signed and forwarded directly to iNARTE.
6. Compose 10 multiple choice questions with correct answers and supporting references.
7. Pass the iNARTE EMC Technician examination..

# Preparing for the iNARTE EMC Examination

## Coordination & Procedures

### Where?

iNARTE has testing centers at over 180 locations in the US and at authorized facilities worldwide. iNARTE also administers the certification at the IEEE EMC Society Symposium annually. If no testing location is near you, iNARTE will coordinate an examination session at your workplace. Contact iNARTE at 1-800-89-NARTE for locations or see the test center listing online at <http://www.narte.org/h/testcenters.asp>

### When?

Most test locations will coordinate an appointment upon request. Indicate your preferred testing dates on your application form. Once your EMC Certification application fee for Engineers or Technicians (includes applicable testing fee) is received, iNARTE will effect the necessary coordination and arrangements for a testing date, time, location and point of contact.

### How?

The examination for EMC engineers or EMC technicians is approximately one day duration in two sessions. All examinations are given with open book (see exam strategy below). Examinations are graded at iNARTE Headquarters and the applicant will be advised of a pass/fail within 10 working days. Passing score is 70%. Should a candidate fail the examination, a retake is permissible following a 90 day period. Examinations may be retaken any number of times, however, an examination processing fee of is required each time the exam is taken, (see <http://www.narte.org/h/fees.asp>).

## Basic Exam Strategy

The iNARTE EMC examination is open book. Study/reference materials recommended for the exam are listed on Page 4.

The EMC Exam consists of two sections of 48 questions.

You must answer 40 of the 48 questions on each part of the exam.

Review all questions, then answer those you are most sure of first.

**You will be graded on the first 40 questions you answer.** *For example: if you answer Questions numbered 1 through 43, you will be graded on questions 1 through 40.*

## EMC Examination Subjects

EMC Engineer Examination Subjects
Bonding
Grounding
Shielding
Interface Control
Filtering
Materials and Special Devices
Conducted Interference
Radiated Interference
Military Specifications/Standards/Handbooks *
EMC Test Plans
Test Equipment
Test Facilities
Safety
Terminology
Mathematic Spectrum Analysis
ESD
EMP
Lightning Protection
Inter-system and Intra-system Design Equipment Design
EMI Prediction
EMI Analysis
Field Theory
Antennas
Filter Theory

EMC Technician Examination Subjects
Bonding
Grounding
Shielding
Interface Control
Filtering
Materials and Special Devices
Conducted Interference
Radiated Interference
Military Specifications/Standards/Handbooks *
EMC Test Plans
Test Equipment
Test Facilities
Safety
Terminology
Mathematic Spectrum Analysis
ESD
EMP
Lightning Protection

\* About Military Standards Questions:

The iNARTE EMC Certification Program was developed in 1988 for and with the US Military (Naval Air Systems Command). Today, the EMC discipline reaches into commercial applications worldwide. Therefore, iNARTE now limits the number of US Mil Std based questions to 8 Mil Std questions in each section. Since the examinee is required to answer only 40 of the 48 questions on each session, he or she can skip these questions entirely.



# EMC Examination Reference Titles and Study Materials

**NOTE:** This list is suggested but not all inclusive. **Bold titles** indicate primary reference material. \* Included on iNARTE EMC Study CD.

1. **Study Guide and Question Preparation Guide for EMC Credentials Examination**, The National Association of Radio and Telecommunications Engineers, Inc. 1995 See order form, Page 5.
2. **Reference Data for Engineers: Radio, Electronics, Computer and Communications**, Howard W. Sams Co., Inc., Indianapolis/Kansas City/New York, Seventh Edition, 1988.
3. **ANSI/IEEE STD 100: IEEE Standard Dictionary of Electrical and Electronic Terms**, IEEE, 1984.
4. Skolnik, Merrill L., **Radar Handbook**, McGraw-Hill Book Company, New York, 1970.
5. Paul, Clayton R., **Introduction to Electromagnetic Compatibility**, New York, John Wiley & Sons, Inc., 1992 Bell Labs Loop Transmission Div., "EMP Engineering and Design Principles (75). ISBN# 0471549274
6. Kraus, John D., **Electromagnetics**, McGraw Hill, 1986
7. Gnecco, Louis T, MSEE, **The Shielded Enclosure Handbook**, Tempest, Inc., Herndon, VA, February 1999. See order form, Page 5
8. Everett, III, Woodrow W. et al., **Study Guide for Electromagnetic Compatibility Engineers**, The SCEEE Press, St. Cloud, FL 1993. See order form, Page 5
9. \*MIL-STD-461F - ELECTROMAGNETIC EMISSION AND SUSCEPTIBILITY REQUIREMENTS FOR THE CONTROL OF ELECTROMAGNETIC INTERFERENCE. *It is recommended that applicants study most recent earlier issues to understand changes that have been implemented.*
10. MIL-STD 464C ELECTROMAGNETIC ENVIRONMENTAL EFFECTS REQUIREMENTS FOR SYSTEMS
11. MIL-STD-449D (NOTICE 1), MILITARY STANDARD: RADIO FREQUENCY SPECTRUM CHARACTERISTICS MEASUREMENT OF (18 MAY 1976)
12. MIL-STD-1310H, SHIPBOARD BONDING, GROUNDING, AND OTHER TECHNIQUES FOR ELECTROMAGNETIC COMPATIBILITY AND SAFETY
13. MIL-HDBK-237 Rev D - ELECTROMAGNETIC COMPATIBILITY MANAGEMENT GUIDE FOR PLATFORMS, SYSTEMS AND EQUIPMENT.
14. MIL-HDBK-419A - GROUNDING, BONDING AND SHIELDING FOR ELECTRONIC EQUIPMENT AND FACILITIES
15. NAVSEA OP 3565/NAVAIR 16-1-529/NAVELEX 0967-LP-624-6010 "Technical Manual" *Electromagnetic Radiation Hazards (U) Hazards to Personnel, Fuel and Other Flammable Material (U)*, Vol. I, 5th Rev., Naval Sea Systems Command, Washington, DC, December 1979.
16. \*OPNAV INST 5100.23B, Navy Occupational Safety and Health (NAVOSH) Program Manual, 28 July 1987. (Latest ANSI Standards, RADHAZ to Personnel.)
17. Law, Preston E.E., *Shipboard Antennas*, 2nd ed., Artech House, Inc., Norwood, Massachusetts, 1986. ISBN# 0890062110
18. Skolnik, Merrill L., *Introduction to Radar Systems*, 2nd ed., McGraw-Hill Book Company, New York, 1962. ISBN# 0070579091
19. Bell Telephone Laboratories, Inc., *Transmission Systems for Communications*, Western Electric Technical Publications, Winston-Salem, North Carolina, Revised Fourth Edition, December 1971.
20. D.F. Strawe, *Electromagnetic Shielding Characteristics of Advanced Composites*, AGARD Conference Proceedings 283, Electromagnetic Effects of (Carbon) Composite Materials Upon Avionics Systems, Lisbon, Portugal, 16-19 June 1990.
21. U.S. Department of Commerce, *Manual of Regulations and Procedures for Federal Radio Frequency Management*, National Telecommunications and Information Administration, Washington, DC, 20230, May 1986 Edition as Revised September 1987. ISBN# 0160164648
22. \**Aircraft Lightning Protection Handbook*, DOT/FAA/CT-89/22, September 1989; Federal Aviation Technical Center, Atlantic City International Airport, Atlantic City, New Jersey, 08405.
23. American Radio Relay League, *The ARRL Handbook for the Radio Amateur*, Newington, CT, 1990.
24. NAVAIR AD 1115, *EMC Design Guide for Avionics and Related Ground Support Equipment*.
25. Kraus, John D., *Antennas*, McGraw-Hill Book Co., Inc., New York, NY.
26. NAVSEA OD 30393, *Design Principles and Practices for Controlling Hazards of Electromagnetic Radiation to Ordnance*, First Revision, 15 January 1980, p. 43.
27. USAF Frequency Management Center, *USAF Frequency Managers Formula Handbook*, Washington, DC 20330-6341.
28. *EMC, Telecom and Computer Encyclopedia Handbook*, emf-emi contol, Inc., Warrenton, VA 20187, 1999.
29. Gnecco, Louis T, MSEE, *Problems and Solutions in Wireless Communications and Electromagnetic Compatibility*, Tempest, Inc., Herndon, VA, February 1999. See order form, Page 5.

**Most MIL STDs are available for free downloading at <http://www.everyspec.com>**

# EMC STUDY MATERIAL ORDER FORM



<b>Name</b>	
<b>Address</b>	
<b>City, ST, Zip</b>	
<b>Day Phone</b>	

Item Descriptions	Quantity	Total
<b>Study Guide and Question Preparation Guide for EMC Credentials Certification Exam</b> <span style="float: right;"><b>\$35.00</b></span> Published by NARTE. The study guide for those preparing to take the NARTE EMC Engineer or Technician certification exam, contains 60 practice questions, with mathematical solutions, explanations and references. Questions are designated by type as Engineer, Technician or both. Covers the examination process, exam preparation and strategy.		
<b>CD ROM Study Guide and Question Preparation Guide for EMC Credentials Certification Exam</b> <span style="float: right;"><b>\$60.00</b></span> Created by NARTE. The above study guide on CD Rom for those preparing to take the NARTE EMC Engineer or Technician certification exam, contains 60 practice questions, with mathematical solutions, explanations and references. Questions are designated by type as Engineer, Technician or both. Covers the examination process, exam preparation and strategy, some MIL-STD's and NARTE Certification Application package. *CD Includes MIL STDs 461, 462, 463, 1310, Handbooks 237 and 419 and OPNAV INST 5100.23 B and Aircraft Lightning Protection Handbook.		
<b>Study Guide for Electromagnetic Compatibility Engineers</b> <span style="float: right;"><b>\$69.00</b></span> <i>Woodrow W. Everett, III, with James J. Whalen and Woodrow W. Everett, Jr.</i> Published by SCEE Press. A compilation of 390 sample questions as a study guide for EMC engineers and technicians. (Note: 219 of the 390 questions are also applicable to Technician.) Questions are arranged in chapters by category.		
<b>Problems and Solutions in Wireless Communications and Electromagnetic Compatibility</b> <span style="float: right;"><b>\$124.00</b></span> <i>Louis T. Gnecco, MSEE</i> Published by Tempest, Inc. February 1999. 112 pages. How to make fast, accurate RF computations without a calculator. This book will provide you with the ability to do Electromagnetic Compatibility and RF calculations quickly and accurately, without a calculator, using mental arithmetic techniques. <b>Not Returnable</b>		
<b>The Shielded Enclosure Handbook</b> <span style="float: right;"><b>\$249.00</b></span> <i>Louis T. Gnecco, MSEE</i> Published by Tempest, Inc. February 1999. 251 pages. This book is a guide for the buyer of a shielded enclosure, for the builder and craftsmen that assemble it, for the tester that certifies it, and finally for the user that must maintain it. <b>Not Returnable</b>		
<b>Shipping charges for US addresses~~ Add \$8 for 1 item, \$10 for 2 items, \$13 for 3-4 items.</b> <b>Orders shipping out of US add an additional \$20 shipping charge to order total.</b> Contact NARTE for orders of 5 or more items		
<b>Order Total:</b>		

**ORDER PAYMENT:**       **Check enclosed, payable to NARTE**

**Credit Card:** \_\_\_\_\_  
    MC      VISA      AMEX      CVV #      Exp. Date

\_\_\_\_\_  
 Signature

To place your order, mail this form with payment to iNARTE, 840 Queen Street, New Bern, NC 28560  
 Credit card orders may call 1-800-89-NARTE or fax this form to 252-672-0111.



# Application Instructions

1. **APPLICATION (Page 7):** Complete the application form and submit to iNARTE with the non-refundable Engineer application fee or non-refundable Technician application fee, (<http://www.narte.org/h/fees.asp>). When application and fees are received, iNARTE will begin to compile the application file and schedule testing. **Upon signing the application form, you agree to abide by the iNARTE Code of Ethics as printed in the iNARTE Membership Handbook and online at <http://www.narte.org/h/codeofethics.asp>**

2. **TESTING:** iNARTE will coordinate the necessary arrangements for a testing date and time at the location chosen by applicant. Accredited Testing Center listings are available from iNARTE HQ or online at <http://www.narte.org/h/testcenters.asp>. Examinations are graded at iNARTE Headquarters and the applicant will be advised of a pass/fail within 10 working days by mail or they may call Headquarters for their results. Passing score is 70%. Should a candidate fail the examination, a retake is permissible following a **90 day** period. Examinations may be retaken any number of times, however, an examination processing fee is required each time the exam is taken.

3. **DETAILED WORK HISTORY FORM (Pages 8-9):** Provide detailed evidence of experience in the appropriate field using a current resume, or the iNARTE Detailed Work History Form. Some credit for college education/degrees may be awarded based on review of official transcripts.

4. **REFERENCES (Reference Form Pages 10-11 ):** Initiate action with those individuals who will serve as references. Using the reference form provided (**Pages 10-11**), these individuals must attest to the applicant's competency at the certification level requested and also serve as character references. One Reference must be from a supervisor. Reference forms should be sent directly to iNARTE.

5. **EVIDENCE OF EDUCATION & TRAINING:** Evidence of completing courses of study or training programs in related areas as offered by educational institutions and/or through internal corporate training programs are given consideration as part of certification. Official school transcripts may be required for experience credit. Photocopies of applicable training certificates may be submitted.

7. **QUESTIONS (Page 12):** Submit ten (10) original multiple choice questions with correct answers and supporting references. Questions which relate to real world workplace engineering or technical/testing situations are preferred. Questions must conform to the format outlined on the iNARTE question form (**Page 12**).

## Notes about the Application Process

- Once any component of your application package is received, NARTE will begin to compile your file.
- You will receive updates on the progress of your application by mail every 6 weeks, or you may contact us to check on the status of your file at **1-800-89-NARTE**.
  - Once the application form and fees are received, iNARTE will initiate examination scheduling.
  - Reference forms should be sent *directly* to iNARTE from the reference provider by mail or **fax at 1-252-672-0111**.

## Application Checklist

- Application
- Eng or Tech Fee (non-refundable)
- Detailed Work History
- 1 Supervisor reference
- 2 Peer references
- 10 questions
- Transcripts/certificates

All application materials should be sent to **iNARTE, 840 Queen Street, New Bern, NC 28560**  
**Forms may be faxed to 252-672-0111, Contact iNARTE with any questions at 1-800-89-NARTE**



This NARTE program is accredited by ICAC©



**APPLICATION for Electromagnetic Compatibility (EMC) CERTIFICATION by  
INTERNATIONAL ASSOCIATION FOR RADIO  
TELECOMMUNICATIONS AND ELECTROMAGNETICS, INC.  
840 Queen Street, New Bern, NC 28560 1-800-89-NARTE or (252) 672-0200**

<b>FOR OFFICE USE ONLY</b>	
Certification Number: _____	Date: _____
Test Type: _____	Score: _____

Name \_\_\_\_\_  
(First) (Middle Initial) (Last)

Name \_\_\_\_\_  
(As to be shown on Certificate)

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Citizen of \_\_\_\_\_

Phone (Work): \_\_\_\_\_ (Home) \_\_\_\_\_

Date of Birth \_\_\_\_\_ Sex  M  F Email: \_\_\_\_\_

Requested Test Center: \_\_\_\_\_ Test Month/Date Requested: \_\_\_\_\_  
See listing at <http://www.narte.org/h/testcenters.asp>

I hereby make application for iNARTE certification as an  EMC Engineer, or  EMC Technician.

I hereby authorize iNARTE, in accordance with iNARTE's privacy policy [www.narte.org/h/privacy.htm](http://www.narte.org/h/privacy.htm) to publish my name, city, state, country and any certification it may issue to me in all of its directories or registries. In addition, iNARTE is authorized to confirm my certification to inquiries on my behalf. I have read and agree to abide by the iNARTE Code of Ethics as published at [www.narte.org/h/codeofethics.asp](http://www.narte.org/h/codeofethics.asp).

\_\_\_\_\_  
 Signature of Applicant \_\_\_\_\_  
Date

**References**

	Name	Telephone Number
1.	_____	_____
2.	_____	_____
3.	_____	_____

**Payment** **Non-refundable application fee, (see <http://www.narte.org/h/fees.asp>).**

Check enclosed  Charge: \_\_\_\_\_  
MC VISA AMEX CVV # Exp. Date

\_\_\_\_\_  
Signature





Additional Contributions: Include title and dates of any published papers; recognized contributions to the Scientific or engineering profession; contributions to wireless installation technical or engineering courses in a "school of recognized standing".

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TECHNICAL/PROFESSIONAL AWARDS

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TECHNICAL/PROFESSIONAL LICENSES

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PROFESSIONAL SOCIETY AFFILIATIONS & GRADES OF MEMBERSHIP

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\_\_\_\_\_  
Applicant's Signature

\_\_\_\_\_  
Date





# INTERNATIONAL ASSOCIATION FOR RADIO TELECOMMUNICATIONS AND ELECTROMAGNETICS, INC.

840 Queen Street, New Bern, NC 28560 Phone: (252) 672-0200. Fax (252) 672-0111

**Applicant's Name** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Dear \_\_\_\_\_ (Name of Reference)

I have applied for certification in the field of Electromagnetic Compatibility, and request that you serve as one of the references on my application. If you are willing to do so, please provide the information requested on this form and return the form to iNARTE at 840 Queen Street, New Bern, NC 28560. The certification requirements for EMC Engineer and EMC Technician are quoted below and I have enclosed a copy of my work experience.

Thank you for your help. Please send the completed forms to iNARTE at your earliest convenience. iNARTE will not process my application until all references submit their forms.

\_\_\_\_\_  
Signature of Applicant  
Date of Application to iNARTE \_\_\_\_\_

## REQUIREMENTS FOR CERTIFICATION AS AN EMC ENGINEER

- 9 years of engineering experience\*, or equivalent based on a combination of education and EMC work experience, which demonstrated competence in EMC engineering.
- Satisfactory performance on a written exam in EMC engineering fundamentals as administered by iNARTE.

Equivalencies granted for study at schools approved by iNARTE are based on the schedule below. Engineering teaching experience may qualify the applicant for up to two years of experience equivalency.

Education	Curriculum	Equivalency
1-4 years undergraduate study without degree	Engineering	1 year of each year of study; maximum of 4 years
BS	Engineering of physical science	4 years
BSET	Engineering technology	2 years
BS/BA	Other than above	2 years
Postgraduate study	Engineering or physical science	Up to one year

## REQUIREMENTS FOR CERTIFICATION AS AN EMC TECHNICIAN

- 6 years of technician experience\*, or equivalent based on a combination of education and EMC work experience, which demonstrated competence as an EMC technician.
- Satisfactory performance on a written exam in EMC technology as administered by iNARTE.

Two years of experience may be granted for graduation from a iNARTE-approved school in a curriculum that includes an electronics technology or applied electronics course. The teaching of electronics or engineering technology may qualify the applicant for up to two years of experience equivalency.

**\*Experience records will be reviewed by iNARTE. The mere execution of work designed by an EMC Engineer or the supervision of such work is not considered to be the practice of engineering.**



**iNARTE EMC CERTIFICATION REFERENCE FORM Page 2– This Form May Be Duplicated**

Name of Applicant \_\_\_\_\_

Do you know the applicant well? \_\_\_\_\_ Casually? \_\_\_\_\_ How Long? \_\_\_\_\_

What is your professional relationship to the applicant? \_\_\_\_\_

Has the applicant been engaged as an EMC Engineer \_\_\_\_\_ or EMC Technician \_\_\_\_\_ for one year prior to "Date of Application"? (Candidate is eligible for certification even if they are not currently practicing their craft.)

Check the areas for which this applicant qualifies:

\_\_\_\_\_ EMC Engineer      \_\_\_\_\_ EMC Technician      \_\_\_\_\_ Both

Please evaluate the applicant in the space below:

<b>ENG</b>	<b>TECH</b>	
_____	_____	Exceptionally well qualified
_____	_____	Well qualified
_____	_____	Marginally qualified
_____	_____	Unqualified (explain below)
_____	_____	Number of year's experience (Based on your personal knowledge)

**Engineer or Technician?** In a nutshell:  
 Engineers know the math and the physics of EMC.  
 Technicians know the instruments and test setups.  
 Engineers need good writing and verbal skills.  
 Technicians need to know the pitfalls of real measurements. Applicants do not have to be competent across the whole spectrum of EMC, i.e., EMP, ESD, TEMPEST, etc., but do have to be competent in the fundamentals, i.e., coupling, filters, shielding, etc. as well as the specifications which apply to their particular specialty.

Additional comments:

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\_\_\_\_\_  
Your name (print)

\_\_\_\_\_  
Your business or affiliation

\_\_\_\_\_  
Your street address

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date





**EMC CERTIFICATION QUESTION SUBMISSION FORM**

*The following format must be used. This form may be copied and used for each question.*

**SAMPLE QUESTION**

According to ISO 11452-1 (1993), for both substitution and closed-loop leveling methods, (CW and AM) the test severity levels are expressed in terms of equivalent \_\_\_\_\_. *Hint: A test severity of 20 V/m means a CE or AM test will be conducted for 28 V/m peak value.*

- a. Voltage.
- b. Current.
- c. RMS.
- d. E-Field.

Answer: C      Time: 5 Minutes      Reference: ISO 114521-1. '93 p.9      For: E & T

**1. Question:** (Try to avoid any possible misinterpretations of the question. If question is negative, i.e., "Which item does **NOT** include the following?", the **NOT** should be bolded and capitalized.)

**2. Answers:** (Only 4 answers) {Include all calculations if the answer is calculated}

- A.
- B.
- C.
- D.

**3. Correct Answer:** \_\_\_\_\_

**4. Applicability**     Engineer                       Technician                       Both

**5. Time required to answer the question:** \_\_\_\_\_ Minutes

**6. Reference(s)** \_\_\_\_\_

**7. Category** (From list below) \_\_\_\_\_

**CATEGORIES OF EMC QUESTIONS**

*In order of preference*

Electrical Networks  
Lightning  
EMC Management  
Special Devices, Materials & Components  
EMP  
Amplifiers  
Signals & Transformers  
ESD  
Spectrum Analysis  
Coupling  
Terminology  
Safety

Grounding & Bonding  
Mathematics  
Transmission Lines  
Filters  
EMI Prediction & Analysis  
EMC Design  
Antennas  
Shielding  
Specifications & Standards  
Test & Measurements/Test Facilities  
Field Theory  
Military Specifications, Standards & Handbooks

**Notes on Question Content**

- The questions you submit must be in your own words.
- Questions which relate to real-life work situations or problems are desirable (see example above).
- Questions should be challenging, yet answerable by a knowledgeable and experienced EMC/EMI practitioner.
- Your questions should be geared toward the certification type for which you are applying (Technician or Engineer).

