THE CITY OF NEW YORK
DEPARTMENT OF CITYWIDE
ADMINISTRATIVE SERVICES
APPLICATION UNIT
1 CENTRE STREET, 14TH FLOOR
NEW YORK, NY 10007

BILL DE BLASIO
Mayor

LISETTE CAMILO
Commissioner

N O T I C E
O F
E X A M I N A T I O N

REQUIRED INFORMATION
APPLICATION
EDUCATION AND EXPERIENCE TEST
FOREIGN EDUCATION EVALUATION GUIDE (IF APPLICABLE)

COMPUTER PROGRAMMER ANALYST

Exam No. 7004

WHEN TO APPLY: From: **September 7, 2016**

To: **September 27, 2016**

APPLICATION FEE: $68.00

If you choose to pay the application fee with a credit/debit/gift card, you will be charged a fee of 2.49% of the payment amount. This fee is nonrefundable.

YOU ARE RESPONSIBLE FOR READING THIS NOTICE IN ITS ENTIRETY BEFORE YOU SUBMIT YOUR APPLICATION.

WHAT THE JOB INVOLVES: Computer Programmer Analysts, under general supervision, with some latitude for independent or unreviewed action or decision, perform work in the design, development, implementation, maintenance, and enhancement of database management systems, operating systems, data communication systems, and/or computer applications, and may supervise work in the development of computer programs. All Computer Programmer Analysts perform related work.

(This is a brief description of what you might do in this position and does not include all the duties of this position.)

THE SALARY: The current minimum salary is $47,692 per annum. This rate is subject to change. There are two assignment levels within this class of positions. Appointments will generally be made to Assignment Level I. After appointment, employees may be assigned to the higher assignment level at the discretion of the agency.

HOW TO APPLY: If you believe you meet the requirements in the "How to Qualify" section, submit an application on the Online Application System (OASys) at *www.nyc.gov/examsforjobs*. Follow the onscreen application instructions for electronically submitting your application and payment, and completing any required information. A unique and valid email address is required to apply online. Several internet service providers, including but not limited to Google, Yahoo!, AOL, Outlook.com, and Mail.com offer free email addresses. **All new OASys accounts require verification before a candidate can submit an application to ensure the accuracy of candidate information. Verification is instantaneous for most accounts, but some accounts may require up to 24 hours to be reviewed by a staff member and resolved. Email notification will be sent to those creating accounts that require additional documentation before they can be resolved. Please keep this information and the application period deadline in mind when creating your account.** The following methods of payment are acceptable: major credit card, bank card associated with a bank account, or a prepaid debit card with a credit card logo which you may purchase online or at various retail outlets.

If you are receiving or participating in certain forms of public assistance/benefits/programs, or are a veteran, you may qualify to have the application fee waived. For more information on eligibility for a fee waiver and documentation requirements, visit the Fee Waiver FAQ on the Online Application System at *https://a856-eeexams.nyc.gov/OLEE/oasys/FAQFeeWaiver.aspx*.

You may come to the DCAS Computer-based Testing & Applications Centers to apply for this examination online and submit a money order payable to DCAS (Exams) or to submit documentation for a fee waiver.

The centers will be open Monday through Saturday from 9:00 AM to 5:00 PM:

Manhattan
2 Lafayette Street
17th Floor
New York, NY 10007

Brooklyn
210 Joralemon Street
4th Floor
Brooklyn, NY 11201

Special Circumstances Guide: This guide is located on the DCAS website at *www.nyc.gov/html/dcas/downloads/pdf/misc/pdf_c_special_circumstances_guide.pdf* and available at the DCAS Computer-based Testing & Applications Centers. This guide gives important information about claiming Veterans' or Legacy credit, and notifying DCAS of a change in your mailing address. Follow all instructions on the Special Circumstances Guide that pertain to you when you complete your "Application for Examination."

READ CAREFULLY AND SAVE FOR FUTURE REFERENCE

HOW TO QUALIFY: You are responsible for determining whether or not you meet the qualification requirements for this examination prior to submitting your application. If you are marked "Not Qualified," your application fee will not be refunded <u>and you will not receive a score</u>.

Education and Experience Requirements:

(1)   A baccalaureate degree from an accredited college or university, including or supplemented by twenty-four (24) semester credits in computer science or a related computer field; or

(2)   A four year high school diploma or its educational equivalent **and** three (3) years of satisfactory full-time computer programming experience; or

(3)   A satisfactory combination of education and experience that is equivalent to (1) or (2) above. College education may be substituted for up to one year of the experience required in (2) above on the basis that sixty (60) semester credits from an accredited college or university is equated to one year of experience. In addition, twenty-four (24) undergraduate and/or graduate semester credits from an accredited college or university in computer science or a related computer field **or** a certificate of at least 625 hours in computer programming from an accredited technical school (post high school) may be substituted for one year of experience. However, all candidates who attempt to qualify under option (3) must have at least a four year high school diploma or its educational equivalent and at least one (1) year of satisfactory full-time computer programming experience.

Note: (1)   To receive credit, all semester credits in computer science or a related computer field from an accredited college or university **must** be entered in **Section A.6** of the Education and Experience Test.

(2)   To receive credit, the certificate of at least 625 hours in computer programming from an accredited technical school (post high school) **must** be entered in **Section A.3** of the Education and Experience Test.

(3)   The following types of experience are not acceptable: end users of a computer system, program or software package; as an end user in the areas of quality assurance (QA), call center, computer technical support, computer operations, telecommunications, data entry/data retrieval or hardware installation; teaching and/or experience in office productivity, graphic design and/or design and documentation software such as Microsoft Office Suite/Back Office, Adobe Suite (Acrobat, Photoshop, Illustrator, etc.), and AutoCAD.

The education requirement must be met by January 31, 2017. The experience requirement must be met by the last day of the Application Period (September 27, 2016).

The high school diploma or its educational equivalent must be approved by a State's Department of Education or a recognized accrediting organization. The technical school (post high school) must be approved by a State's Department of Education or a recognized accrediting organization. The college or university must be accredited by regional, national, professional, or specialized agencies recognized as accrediting bodies by the U.S. Secretary of Education and by the Council for Higher Education Accreditation (CHEA).

If you were educated outside the United States, you must have your foreign education evaluated to determine its equivalence to education obtained in the United States. This is required <u>only</u> if you need credit for your foreign education in this examination.

You must clearly specify in detail all of your relevant education and experience on your Education and Experience Test and submit it by the end of the Application Period. If you are currently employed by the City of New York, do not assume that persons reviewing your Education and Experience Test will know information which you do not provide on your Education and Experience Test, including information about your current job. If you have applied for a previous examination, do not assume that persons reviewing your Education and Experience Test will know about information you provided on a previous Education and Experience Test.

You will <u>not</u> receive credit for education which you obtain after January 31, 2017 or experience which you obtain after the end of the Application Period.

Residency Requirement: City residency is not required for this position.

English Requirement: You must be able to understand and be understood in English.

Proof of Identity: Under the Immigration Reform and Control Act of 1986, you must be able to prove your identity and your right to obtain employment in the United States prior to employment with the City of New York.

REQUIRED INFORMATION:

1.   **Application for Examination**: Follow the online instructions, including those relating to the payment of fee and, if applicable, those found in the Special Circumstances Guide.

2.   **Education and Experience Test**: Fill out **Sections A.1 (if applicable), A.2, A.3 (if applicable), A.4 (if applicable), A.6 (if applicable), B, and D (if applicable).** This test must be filled out completely and in detail for you to receive your proper rating. Follow the online instructions.

3.   **Foreign Education Evaluation Guide** (**Required <u>only</u> if you need credit for your foreign education in this examination**): If you were educated outside the United States, you must have your foreign education evaluated to determine its equivalence to education obtained in the United States. The services that are approved to make this evaluation are listed on the Foreign Education Evaluation Guide located on the DCAS website at *www.nyc.gov/html/dcas/downloads/pdf/misc/foreigneducation.pdf*. When you contact the evaluation service, ask for the evaluation as follows:

(A)   If you wish to claim a diploma/degree **only** and do not wish to claim any semester credits in the subject area(s) described in the *How to Qualify* section on page 2 and/or *The Test* section on pages 3 and 4, ask for a **"document-by-document"** evaluation of your foreign education.

(B)   If you wish to claim a diploma/degree **and/or** semester credits in the subject area(s) described in the *How to Qualify* section on page 2 and/or *The Test* section on pages 3 and 4, ask for a "**course-by-course**" evaluation (which includes a "document-by-document" evaluation) of your foreign education.

(C)   If you wish to claim a certificate of at least 625 hours in computer programming described in the *How to Qualify* section on page 2, then ask the Evaluation Service to recommend the appropriate type of evaluation and ensure that the evaluation states the number of hours completed.

(D)   If you wish to claim continuing education course(s) described in *The Test* section on pages 3 and 4, ask the Evaluation Service to recommend the appropriate type of evaluation.

You must have one of these services submit its evaluation of your foreign education directly to the Department of Citywide Administrative Services no later than eight weeks from the last date for applying for this examination.

THE TEST: Your score will be determined by an education and experience test. You will receive a score of 70 points for meeting the education and experience requirements listed above. After these requirements are met, you will receive credit **for up to four additional years of experience,** up to a maximum of 100 points, on the following basis:

Experience:

If you have satisfactory full-time computer programming experience coding program instructions <u>and</u> performing, advising and/or supervising others on at least one of the following areas: documenting computer systems and programs; writing technical procedure manuals for computer systems and programs; preparing, reviewing and analyzing detailed computer system specifications; quality assurance testing of program instructions, for (see notes 1 and 2 below):

	You will receive:
At least 6 months but less than 1 year	6 points
At least 1 year but less than 2 years	12 points
At least 2 years but less than 3 years	18 points
At least 3 years but less than 4 years	24 points
4 years of experience	30 points

If you have satisfactory full-time computer programming experience <u>assisting</u> in coding program instructions and/or <u>assisting</u> on projects in at least one of the following areas: documenting computer systems and programs; writing technical procedure manuals for computer systems and programs; preparing, reviewing and analyzing detailed computer systems specifications; quality assurance testing of program instructions, for (see notes 1 and 2 below):

	You will receive:
At least 6 months but less than 1 year	3 points
At least 1 year but less than 2 years	6 points
At least 2 years but less than 3 years	9 points
At least 3 years but less than 4 years	12 points
4 years of experience	15 points

<u>Note</u>s:

1.   **You must include the type of experience in assisting, performing, advising and/or supervising others on one or more of the areas listed above for each and every entry for employment/work experience. If you do not state the type of experience in assisting, performing, advising and/or supervising others, the experience cannot be accepted. When describing each task, you must start each task statement by writing in one (1) of the following:**
   a.   **"assisting"**
   b.   **"performing"**
   c.   **"advising"**
   d.   **"supervising others"**

2.   **The following types of experience are not acceptable: end users of a computer system, program or software package; as an end user in the areas of quality assurance (QA), call center, computer technical support, computer operations, telecommunications, data entry/data retrieval or hardware installation; teaching and/or experience in office productivity, graphic design and/or design and documentation software such as Microsoft Office Suite/Back Office, Adobe Suite (Acrobat, Photoshop, Illustrator, etc.), and AutoCAD.**

Education: Ten (10) points is the maximum amount of additional points for education that may be credited for graduate credit(s), undergraduate credit(s), **and** continuing education course(s) combined.

If you have graduate semester credits completed at an accredited college or university in computer science, computer information systems and/or science, technology, engineering and mathematics (STEM) course areas such as physics, engineering, logic/proof-based mathematics, and/or statistics, for the completion of (see notes 1 and 2 below):   **You will receive:**

3 to 8 graduate semester credits	2 points
9 to 14 graduate semester credits	4 points
15 to 20 graduate semester credits	6 points
21 to 26 graduate semester credits	8 points
27 or more graduate semester credits	10 points

If you have undergraduate semester credits completed at an accredited college or university in computer science, computer information systems and/or science, technology, engineering and mathematics (STEM) course areas such as physics, engineering, logic/proof-based mathematics, and/or statistics, for the completion of (see notes 1 and 2 below):   **You will receive:**

3 to 8 undergraduate semester credits	1 point
9 to 14 undergraduate semester credits	2 points
15 to 20 undergraduate semester credits	3 points
21 to 26 undergraduate semester credits	4 points
27 or more undergraduate semester credits	5 points

If you have completed continuing education course(s) in computer programming, computer science, computer information systems and/or science, technology, engineering and mathematics (STEM) course areas such as physics, engineering, logic/proof-based mathematics, and/or statistics at an accredited college or university or at a professional training center, for the completion of (see note 2 below):   **You will receive:**

One (1) continuing education course	1 point
Two (2) continuing education courses	3 points
Three (3) continuing education courses	5 points

Notes:

1.   **Any course(s) completed as part of a baccalaureate degree program, including those in STEM course areas, which will be applied toward the education requirement, cannot receive additional credit. If the twenty-four (24) semester credits in computer science or a related computer field are applied toward the qualification requirement, they cannot receive additional credit.**

2.   **You must list each and every undergraduate, graduate, and/or continuing education course for which you wish to be evaluated for credit in Section A.6 of the Education and Experience Test.**

You will receive a maximum of one year of experience credit for each year you worked. If you have any of the above experience on a part-time basis, it will be credited according to the equivalent percent of full-time experience. Each year of experience will be credited under only one category which will be the highest appropriate category. **Education and experience used to meet the minimum requirements cannot be used to gain additional credit.**

You must clearly specify in detail all of your relevant education and experience on your Education and Experience Test and submit it by the end of the Application Period. Do not assume that persons reviewing your Education and Experience Test will know information which you do not provide on your Education and Experience Test, including information about your current job. If you have applied for a previous examination, do not assume that persons reviewing your Education and Experience Test will know about information you provided on a previous Education and Experience Test. You will <u>not</u> receive credit for education which you obtain after January 31, 2017 or experience which you obtain after the end of the Application Period.

Education must be obtained **by January 31, 2017** and experience must be obtained by **the last day of the Application Period (September 27, 2016)**.

THE TEST RESULTS: If you pass the education and experience test, your name will be placed in final score order on an eligible list and you will be given a list number. You will be notified by mail of your test results. If you meet all requirements and conditions, you will be considered for appointment when your name is reached on the eligible list.

CHANGE OF MAILING AND/OR EMAIL ADDRESS: It is critical that you promptly notify DCAS of any change to your mailing address and/or email address. You may miss important information about your exam(s) or consideration for appointment, including important information that may require a response by a specified deadline, if we do not have your correct mailing and/or email address. Change of mailing and/or email address requests submitted to any place other than DCAS, such as your Agency or to the United States Postal Service will NOT update your records with DCAS. To update your mailing and/or email address with DCAS, you must submit a change request by mail or in person. Your request must include your full name, social security number, exam title(s), exam number(s), old mailing and/or email address, and your new mailing and/or email address. Your request can be mailed to DCAS Records Room, 1 Centre Street, 14th Floor, New York, NY 10007 or brought in person to the same address Monday through Friday from 9AM to 5PM.

ADDITIONAL INFORMATION:

Selective Certification for Certification and/or Special Experience: If you have the certification and/or experience listed in one or more of the areas listed below, you may be considered for appointment to positions requiring a certification and/or experience through a process called Selective Certification. If you qualify for Selective Certification, you may be given preferred consideration for positions requiring this certification and/or experience. **Your certification(s) and/or experience will be checked by the appointing agency at the time of appointment.**

> Note: In **Section D** of the Education and Experience Test, please enter the 3-digit code which corresponds to the Selective Certification(s) you wish to be considered for and separate each with a comma and no space. There should be no more than ten (10) Selective Certification entries per line. For example, if you wish to select Selective Certifications #1 and #2, enter the following in **Section D** of the Education and Experience Test: **NED,NEC**.

1.   **.NET Middle Tier Developer**: At least three (3) years of satisfactory, full-time experience working with the .NET development stack. Experience should include, but is not limited to: designing and implementing an Entity Domain Model; utilizing ADO.NET and ORM tools such as Entity Foundation, Nhibernate, Dapper, etc.; Domain-Driven Design; and Command Query Response Segregation (CQRS). **To add Selective Certification for .NET Middle Tier Developer, enter "NED" in Section D of the Education and Experience Test.**

2.   **.NET MVC Developer**: At least three (3) years of satisfactory, full-time experience working with .NET web applications leveraging the ASP.NET MVC Architecture. The experience should include, but is not limited to: ASP.NET MVC, Kendo UI, TypeScript, Javascript, Web API, etc. **To add Selective Certification for .NET MVC Developer, enter "NEC" in Section D of the Education and Experience Test.**

3.   **Agile Scrum Certification**: A valid SCRUM certification (e.g., Certified Scrum Professional (CSP) from any institution, PMI Agile Certified Practitioner (PMI-ACP) from the Project Management Institute (PMI), Certified Scrum Master (CSM) from any institution) **and** at least two (2) years of satisfactory, full-time experience implementing Scrum to manage IT projects using the Agile software development methodology by conducting daily Scrum meetings as the Scrum master with complex project teams. **To add Selective Certification for Agile Scrum Certification, enter "SUM" in Section D of the Education and Experience Test.**

4.   **API Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of Application Program Interfaces (APIs). The experience should include, but are not limited to: SOA, SOAP, REST, XML, Java, .NET, Test-driven Development (TDD), Git, Subversion, CVS, Eclipse, Apache Xerces, Tomcat, Jboss, Oracle WebLogic, DOM and Unix. **To add Selective Certification for API Development, enter "API" in Section D of the Education and Experience Test.**

5.   **Apple Certified Support Professional (ACSP)**: A valid Apple Certified Support Professional (ACSP) certification from an Apple Authorized Training Center **and** at least one (1) year of satisfactory, full-time experience in, but not limited to, defining, building, and implementing software solutions using Apple-based applications/systems. **To add Selective Certification for Apple Certified Support Professional (ACSP), enter "107" in Section D of the Education and Experience Test.**

6.   **Apple Support**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of applications, operating systems and computer imaging in an Apple environment. **To add Selective Certification for Apple Support, enter "APS" in Section D of the Education and Experience Test.**

7.   **Application Development**: At least one (1) year of satisfactory, full-time experience in the analysis, design, implementation, maintenance and enhancement of applications using VB.Net, VBA, C#, VBScript, ASP.NET, PHP and/or other languages. **To add Selective Certification for Application Development, enter "APD" in Section D of the Education and Experience Test.**

8.   **Back-end Application Development**: At least one (1) year of satisfactory, full-time experience in back-end mainframe application development. The experience should include, but is not limited to: Adabas/Natural or DB2. **To add Selective Certification for Back-end Application Development, enter "BED" in Section D of the Education and Experience Test.**

9.   **BMC Remedy Development**: At least one (1) year of satisfactory, full-time experience in the analysis, design, development, implementation and maintenance of applications including BMC Remedy ITSM 7.x/8.x, Remedy ARS 8.x, Mid-Tier 8.x, ITSM 8.x, CMDB 8.x or higher versions. **To add Selective Certification for BMC Remedy Development, enter "BMC" in Section D of the Education and Experience Test.**

10. **Browser-Based Client-Side Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of browser-based client-side web applications. The experience should include, but is not limited to: HTML, CSS, JavaScript, AJAX, XML, JSON, Flash, Bootstrap or a similar framework, Google Maps and AngularJS. **To add Selective Certification for Browser-Based Client-Side Development, enter "BAD" in Section D of the Education and Experience Test.**

11. **Business Analysis**: At least two (2) years of satisfactory, full-time experience employing User-Centered Analysis techniques (interviews, direct observations, requirement work sessions, etc.) in a variety of systems development life cycle (SDLC) methodologies, including Agile, to understand and elicit business needs and clearly define the requirements package for IT applications. **To add Selective Certification for Business Analysis, enter "BNA" in Section D of the Education and Experience Test.**

12. **Business Intelligence (BI) Analysis**: At least two (2) years of satisfactory, full-time experience in the analysis, design and implementation of Business Intelligence (BI) applications and reporting solutions that includes tasks and activities utilizing BI concepts and Data Warehousing methodologies (e.g., Star Schemas, Dimensional Models, and Data marts), analyzing and designing solutions using BI Tools and/or data modeling, data copying/ETL (Extract, Transform and Load) design and developing and employing functional artifacts. Examples include, but are not limited to: BI Tools (OBIEE, Jasper, Tableau, Crystal Report, SSRS, Cognos), Data Copying (Informatica, SSIS, Talend, Pentaho, iWay); Functional artifacts (Requirements Definitions, Report Mockups, Report Designs, Data Dictionary, Conceptual data models, Glossary). **To add Selective Certification for Business Intelligence (BI) Analysis, enter "BIA" in Section D of the Education and Experience Test.**

13. **Business Intelligence/Analytics Systems Administration**: At least one (1) year of satisfactory, full-time experience in administering, supporting, designing, developing, installing, configuring, implementing, maintaining and/or enhancing Business Intelligence or Analytics systems. Examples include, but are not limited to: OBIEE, DAC, Informatica Power Exchange, Power Center, SSIS, Data Warehouse, SAS, PL/SQL, BI Publisher, Actuate and/or BI Publisher reports, Visual Studio, IIS, WebLogic, WebTrend, SQL Server, SSRS, XML/XSL/Web Services, Unix, Linux and SQL. **To add Selective Certification for Business Intelligence/Analytics Systems Administration, enter "BIS" in Section D of the Education and Experience Test.**

14. **Business Intelligence/Analytics Systems Development**: At least two (2) years of satisfactory, full-time experience in designing, developing, configuring, implementing, integrating, maintaining and/or enhancing Business Intelligence or Analytics systems. Examples include, but are not limited to: OBIEE, DAC, Informatica Power Exchange, Informatica Power Center Designer, Informatica Power Center Repository Manager, DTS, SSRS, SSIS, Data Modeling, PL/SQL, C, BI Publisher, Actuate and/or BI Publisher reports, Oracle Databases, WebTrends, SQL Server, XML/XSL/Web Services, integrations using/with Cloud APIs, IBM Messaging Queues, Customer Relationship Management (CRM) Systems, and ETL tools. **To add Selective Certification for Business Intelligence/Analytics Systems Development, enter "BID" in Section D of the Education and Experience Test.**

15. **Business Performance Management**: At least two (2) years of satisfactory, full-time experience defining key performance goals, creating indicators and measuring performance through reports development; reporting on consolidated data from various sources by running SQL queries against databases and programming the necessary macros (e.g. using VBA) to best illustrate progress, trends and exceptions. **To add Selective Certification for Business Performance Management, enter "BPM" in Section D of the Education and Experience Test.**

16. **Certification of Competency in Business Analysis (CCBA)**: A valid Certification of Competency in Business Analysis (CCBA) from the International Institute of Business Analysis (IIBA) **and** at least two (2) years of satisfactory, full-time experience employing User-Centered Analysis techniques (interviews, direct observations, requirement work sessions, etc.) in a variety of systems development life cycle (SDLC) methodologies, including Agile, to understand business needs and clearly define the requirements for IT applications. **To add Selective Certification for Certification of Competency in Business Analysis (CCBA), enter "CCB" in Section D of the Education and Experience Test.**

17. **Certified Associate in Project Management (CAPM)**: A valid Certified Associate in Project Management (CAPM) certification from the Project Management Institute (PMI). **To add Selective Certification for Certified Associate in Project Management (CAPM), enter "CAP" in Section D of the Education and Experience Test.**

18. **Certified Associate in Software Testing (CAST) Certification**: A valid Certified Associate in Software Testing (CAST) certification from the International Software Certification Board (ISCB) **and** at least two (2) years of satisfactory, full-time experience employing various software testing techniques in a variety of systems development life cycle (SDLC) methodologies, including Agile, to ensure the quality of the system under development for IT applications. **To add Selective Certification for Certified Associate in Software Testing (CAST) Certification, enter "CAS" in Section D of the Education and Experience Test.**

19. **Certified Business Analysis Professional (CBAP) Certification**: A valid Certified Business Analysis Professional (CBAP) certification from the International Institute of Business Analysis (IIBA) **and** at least two (2) years of satisfactory, full-time experience employing User-Centered Analysis techniques (interviews, direct observations, requirement work sessions, etc.) in a variety of systems development life cycle (SDLC) methodologies, including Agile, to understand business needs and clearly define the requirements for IT applications. **To add Selective Certification for Certified Business Analysis Professional (CBAP) Certification, enter "CBA" in Section D of the Education and Experience Test.**

20. **Certified Software Tester (CSTE) Certification**: A valid Certified Software Tester (CSTE) certification from the International Software Certification Board (ISCB) **and** at least four (4) years of satisfactory, full-time experience employing various software testing techniques in a variety of systems development life cycle (SDLC) methodologies, including Agile, to ensure the quality of the system under development for IT applications. **To add Selective Certification for Certified Software Tester (CSTE) Certification, enter "CTC" in Section D of the Education and Experience Test.**

21. **Cherwell Development**: At least one (1) year of satisfactory, full-time experience in the analysis, design, development, implementation and maintenance of Cherwell ITSM applications. **To add Selective Certification for Cherwell Development, enter "CND" in Section D of the Education and Experience Test.**

22. **CompTIA A+**: A valid CompTIA A+ certification **and** at least one (1) year of satisfactory, full-time experience in, but not limited to, defining, building, deploying or maintaining software solutions applications/systems. **To add Selective Certification for CompTIA A+, enter "A+C" in Section D of the Education and Experience Test.**

23. **Configuration Management Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of configuration management development in a web-based environment. The experience should include, but is not limited to: TeamCity, Hudson, Chef and TFS - Team Foundation Server, Ruby on Rail, Python, PHP, Git, Subversion, Unix and Windows. **To add Selective Certification for Configuration Management Development, enter "CMD" in Section D of the Education and Experience Test.**

24. **Content Management Systems Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of content management systems development. The experience should include, but is not limited to: EMC Documentum, Java, ANT, TeamCity, Subversion, Rules Engine and Junit. **To add Selective Certification for Content Management Systems Development, enter "MSD" in Section D of the Education and Experience Test**.

25. **Content Strategy/Information Architecture**: At least two (2) years of satisfactory, full-time experience in information architecture design, enterprise content management systems, writing for the web and editing, including one (1) year of satisfactory, full-time experience in content strategy, content taxonomy and/or search engine optimization. **To add Selective Certification for Content Strategy/Information Architecture, enter "CSI" in Section D of the Education and Experience Test.**

26. **CRM Solutions Design**: At least three (3) years of satisfactory, full-time experience in the analysis, design and implementation of Customer Relationship Management (CRM) solutions that includes analyzing and designing solutions using commercial off-the-shelf (COTS) CRM software, developing and employing functional artifacts, and supporting the solution through the systems development life cycle (SDLC). Examples include, but are not limited to: CRM modules (Contact and Account Management, Employees, Marketing, Service, Products, Activities and Correspondence, Reporting); CRM concepts (Configuration, Customization, Workflows, System integrations, Security Administration, Data Visibility and Access Control); COTS Software (Siebel, Microsoft Dynamics, Salesforce); and Functional artifacts (Solution Designs, Use Cases, User Stories, Requirements Definitions, Process Definitions, User Interface Design). **To add Selective Certification for CRM Solutions Design, enter "232" in Section D of the Education and Experience Test.**

27. **CRM Systems Administration**: At least one (1) year of satisfactory, full-time experience in administering, supporting, designing, developing, installing, configuring, implementing, maintaining and/or enhancing industry leading Customer Relationship Management (CRM) Systems. Examples include, but are not limited to: Siebel, MS Dynamics, Oracle CRM and Salesforce, Actuate and/or BI Publisher reports, Visual Studio, IIS, SQL Server, SSRS, XML/XSL/Web Services, Unix, Linux and SQL. **To add Selective Certification for CRM Systems Administration, enter "233" in Section D of the Education and Experience Test.**

28. **CRM Systems Development**: At least two (2) years of satisfactory, full-time experience designing, developing, configuring, implementing, maintaining and/or enhancing industry leading Customer Relationship Management (CRM) Systems (e.g., Siebel, MS Dynamics, Oracle CRM, Salesforce), creating reports in Actuate and/or BI Publisher, and developing using Visual Studio, SSRS, XML/XSL/Web Services, SQL, Java Script, C++ and HTML. **To add Selective Certification for CRM Systems Development, enter "234" in Section D of the Education and Experience Test.**

29. **Data Analysis:** At least two (2) years of satisfactory, full-time experience importing, cleaning, transforming, validating and/or modeling data with the purpose of drawing conclusions from the data for decision-making purposes; designing and presenting conclusions gained from analyzing data using statistical tools such as Microsoft Excel, SAS, SPSS, etc. and report writing using Crystal Reports, SQL Server Reporting Services, Microsoft Access Reports, etc. **To add Selective Certification for Data Analysis, enter "DAA" in Section D of the Education and Experience Test.**

30. **Database Development**: At least two (2) years of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of database development for web applications. The experience should include, but is not limited to: Data modeling, Oracle, Microsoft SQL Server, MySQL, SQL, Stored Procedures and SQL Query Analyzers. **To add Selective Certification for Database Development, enter "DDD" in Section D of the Education and Experience Test.**

31. **Enterprise Knowledge Sharing**: At least one (1) year of satisfactory, full-time experience producing tools, events, and communication platforms that facilitate knowledge-sharing on IT topics across a large organization or municipal government. This includes, but is not limited to, managing product development user groups and incorporating technical input into software releases or delivery enhancements; coordinating technical forums focused on key enterprise IT service and product issues; and administering collaboration platforms, such as Microsoft SharePoint, to support technical reference repositories, share resources, create a network of organizational and individual technical expertise, and develop and evaluate enterprise technology solutions. **To add Selective Certification for Enterprise Knowledge Sharing, enter "EKS" in Section D of the Education and Experience Test.**

32. **Exchange Administration**: At least three (3) years of satisfactory, full-time experience in configuring and managing Microsoft Active Directory environments including installing and administering server-based production systems. **To add Selective Certification for Exchange Administration, enter "25E" in Section D of the Education and Experience Test.**

33. **Front-end Development**: At least one (1) year of satisfactory, full-time experience performing front-end development using HTML, HTML5, CSS, CSS3, Javascript, enterprise content management systems, photo/graphics editing software, CSS frameworks, Javascript frameworks and responsive web standards/concepts. **To add Selective Certification for Front-end Development, enter "FED" in Section D of the Education and Experience Test.**

34. **Functional Testing**: At least two (2) years of satisfactory, full-time experience performing functional testing tasks for applications with browser-based user interface and web services including but not limited to analyzing business requirements for completeness and testability; designing requirements based test cases; executing test cases; and registering, reporting and tracking defects using HP Quality Center as the test management system. **To add Selective Certification for Functional Testing, enter "HBN" in Section D of the Education and Experience Test.**

35. **Geographic Information Systems (GIS)**: At least one (1) year of satisfactory, full-time experience using Geographical Information Systems (GIS) in one of the following capacities: maintenance of geospatial data, spatial analysis, map production, and/or supporting an organization's operations. **To add Selective Certification for Geographic Information Systems (GIS), enter "GIS" in Section D of the Education and Experience Test.**

36. **Geospatial Application Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance or enhancement of responsive web or mobile geospatial and/or mapping applications and/or services. Examples include, but are not limited to: ESRI, Oracle Spatial, PostGIS, Open Geo Suite, Google, Mapbox, CartoDB, Java, JavaScript and Python. **To add Selective Certification for Geospatial Application Development, enter "GAD" in Section D of the Education and Experience Test.**

37. **Geosupport Development**: At least one (1) year of satisfactory, full time experience in the analysis, design, implementation, maintenance, customization, and enhancement of Geosupport applications using one or more of the following: PL/1, C, .NET, Java, SQL Server, JCL, VSAM and CICS. **To add Selective Certification for Geosupport Development, enter "316" in Section D of the Education and Experience Test.**

38. **IBM Certified System Administrator - WebSphere Application Server Network Deployment**: A valid IBM Certified System Administrator - WebSphere Application Server Network Deployment certification **and** at least two (2) years of satisfactory, full-time experience in the installation, configuration, implementation, maintenance and enhancement of Web-Content Management Systems. **To add Selective Certification for IBM Certified System Administrator - WebSphere Application Server Network Deployment, enter "341" in Section D of the Education and Experience Test.**

39. **IBM Certified System Administrator - WebSphere MQ or - WebSphere Message Broker**: A valid IBM Certified System Administrator - WebSphere MQ certification **or** IBM Certified System Administrator - WebSphere Message Broker certification **and** at least one (1) year of satisfactory, full-time experience in the installation, configuration, implementation, maintenance and enhancement of Enterprise Integration Bus and its related platforms. **To add Selective Certification for IBM Certified System Administrator - WebSphere MQ or - WebSphere Message Broker, enter "342" in Section D of the Education and Experience Test.**

40. **Information Technology Policy**: At least two (2) years of satisfactory, full-time experience writing technical policies and standards for a large public organization; working with subject matter experts to set policy requirements and objectives; writing highly technical and detailed content with exposure to all aspects of enterprise IT and telecommunications; managing the planning, development, draft revision, executive review, communication, and enforcement of organizational policies. **To add Selective Certification for Information Technology Policy, enter "42Q" in Section D of the Education and Experience Test.**

41. **Integration Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of application and data integrations using enterprise service bus, messaging middleware technologies and ETL technologies. Examples include, but are not limited to: WebSphere Message Broker, Websphere MQ, Websphere DataPower, Iway Service Manager, Informatica, and Talend. **To add Selective Certification for Integration Development, enter "IDD" in Section D of the Education and Experience Test.**

42. **ITIL Certification**: A valid ITIL Practitioner certification **and** at least two (2) years of satisfactory, full-time experience with implementation, configuration, change and incident management and process support in an IT enterprise level environment. **To add Selective Certification for ITIL Certification, enter "417" in Section D of the Education and Experience Test.**

43. **IT Infrastructure Implementation, Release & Deployment Support**: At least one (1) year of satisfactory, full-time IT release management experience implementing technical infrastructure projects, including planning, scheduling and controlling the migration life cycle of all new and changed assets from Test to Live environments. **To add Selective Certification for IT Infrastructure Implementation, Release & Deployment Support, enter "42A" in Section D of the Education and Experience Test.**

44. **IT Infrastructure Project Management**: At least two (2) years of satisfactory, full-time IT project management experience implementing technical infrastructure projects, including provisioning new environments, upgrading technical infrastructure, migrating between environments, and provisioning of new technical services, working with customers to define and develop complete technical requirements and specifications, coordinating the overall solutioning process and approval process working with various technical oversight stakeholders, and working with multiple cross-functional service delivery teams to complete technical implementations. **To add Selective Certification for IT Infrastructure Project Management, enter "42B" in Section D of the Education and Experience Test.**

45. **IT Project Administration**: At least two (2) years of satisfactory, full-time IT project administration experience using Agile and/or Waterfall systems development life cycle (SDLC) methodologies; including tracking and reporting project progress and adherence to Project Management Office standards **and** at least two (2) years of satisfactory, full-time experience participating in projects involving multi-disciplinary teams (e.g., Business Analysts, and/or UX Designers, and/or Application Architects, and/or Developers, and/or Server Engineers, and/or Network Engineers, and/or Security Engineers, and/or Quality Assurance Testers, and/or Support Engineers). All candidates must have gained as part of the required four (4) years of satisfactory, full-time experience at least two (2) years of satisfactory, full-time experience with project management, project portfolio management and IT Service Management tools, such as MS Project, CA Clarity, and BMC Remedy. **To add Selective Certification for IT Project Administration, enter "42F" in Section D of the Education and Experience Test.**

46. **Kinetic Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation and maintenance of applications including Kinetic Requests 5.x, Kinetic Survey 5.x, Kinetic Task Engine 3.x or higher versions. **To add Selective Certification for Kinetic Development, enter "KDE" in Section D of the Education and Experience Test.**

47. **M.204 Mainframe Developer**: At least three (3) years of satisfactory, full-time experience in the analysis, design, implementation, maintenance and enhancement of M.204 applications in the Mainframe environment. **To add Selective Certification for M.204 Mainframe Developer, enter "MDL" in Section D of the Education and Experience Test.**

48. **Mainframe Development**: At least one (1) year of satisfactory, full-time experience in the analysis, design, implementation, maintenance and enhancement of application programs using Adabas/Natural, SAS, Assembler, MVS/TSO, CICS and/or JCL. **To add Selective Certification for Mainframe Development, enter "465" in Section D of the Education and Experience Test.**

49. **Microsoft Certified Solutions Associate (MCSA)**: A valid Microsoft Certified Solutions Associate (MCSA) certification from Microsoft **and** at least one (1) year of satisfactory, full-time experience in, but not limited to, defining, building, and implementing software solutions using Microsoft applications/systems. **To add Selective Certification for Microsoft Certified Solutions Associate (MCSA), enter "MCA" in Section D of the Education and Experience Test.**

50. **Microsoft Certified Solutions Expert (MCSE)**: A valid Microsoft Certified Solutions Expert (MCSE) certification from Microsoft **and** at least one (1) year of satisfactory, full-time experience in, but not limited to defining, building, and implementing software solutions using Microsoft applications/systems. **To add Selective Certification for Microsoft Certified Solutions Expert (MCSE), enter "MCE" in Section D of the Education and Experience Test.**

51. **Microsoft SharePoint Development**: At least one (1) year of satisfactory, full time experience in the analysis, design, implementation, maintenance, customization, and enhancement of SharePoint applications. **To add Selective Certification for Microsoft SharePoint Development, enter "45J" in Section D of the Education and Experience Test.**

52. **Mobile Application Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of mobile application development. The experience should include, but is not limited to: Swift, Objective-C, Java, Android API, xCode, MAC OS X, Google Maps, and Test-Driven Development (TDD). **To add Selective Certification for Mobile Application Development, enter "475" in Section D of the Education and Experience Test.**

53. **NoSQL Developer**: At least three (3) years of satisfactory, full-time experience in NoSQL Technologies including, but not limited to: Redis, CouchDb, MongoDb, etc. **To add Selective Certification for NoSQL Developer, enter "540" in Section D of the Education and Experience Test.**

54. **OSX and iOS Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of Programs using OSX, Objective C, Swift, iOS 10 and Xcode. **To add Selective Certification for OSX and iOS Development, enter "582" in Section D of the Education and Experience Test.**

55. **Performance Testing**: At least one (1) year of satisfactory, full-time experience as a functional tester **and** at least two (2) years of satisfactory, full-time experience with performance testing activities such as analyzing application functionality and architecture; script creation; execution, analysis, and reporting of results; troubleshooting application issues; and deep diagnostics using HP LoadRunner and/or Performance Center for applications with a browser-based user interface. **To add Selective Certification for Performance Testing, enter "583" in Section D of the Education and Experience Test.**

56. **PMI Agile Certified Practicioner (PMI-ACP) Certification**: A valid PMI Agile Certified Practitioner (PMI-ACP) from the Project Management Institute (PMI) **and** at least two (2) years of satisfactory, full-time Agile IT project management experience. **To add Selective Certification for PMI Agile Certified Practicioner (PMI-ACP) Certification, enter "586" in Section D of the Education and Experience Test.**

57. **Problem Analysis**: At least one (1) year of satisfactory, full-time experience analyzing and responding to known high-impact and recurring IT service issues in a large, complex IT enterprise environment (servers, applications, networks, storage, end-user support, etc.). **To add Selective Certification for Problem Analysis, enter "588" in Section D of the Education and Experience Test.**

58. **Project Management Professional (PMP) Certification**: A valid Project Management Professional (PMP) certification from the Project Management Institute (PMI) **and** at least two (2) years of satisfactory, full-time IT project management experience. **To add Selective Certification for Project Management Professional (PMP) Certification, enter "PMP" in Section D of the Education and Experience Test.**

59. **Project Portfolio Management**: At least one (1) year of satisfactory, full-time experience modeling, designing, executing and monitoring project portfolio management (PPM) processes and procedures, including management of project portfolios, project prioritization, resource management and administering, monitoring, designing, developing, implementing and/or enhancing PPM tools for tasks such as user administration, report development and screen design. **To add Selective Certification for Project Portfolio Management, enter "PPM" in Section D of the Education and Experience Test.**

60. **Script Development**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of programs using scripting languages. Examples include, but are not limited to: Python, VBScript, JavaScript, Perl, Ruby, and AppleScript. **To add Selective Certification for Script Development, enter "611" in Section D of the Education and Experience Test.**

61. **Service Desk Quality Assurance**: At least one (1) year of satisfactory, full-time experience as a Quality Assurance auditor/analyst programming, designing, developing and analyzing service desk systems and tools in a technical support and help desk environment. Experience should include, but is not limited to: programming and designing the creation of QA forms and checkpoints; data collection and analysis of Quality Assurance performance; data management; advanced use of MS Excel, Word, and Powerpoint; and performance analysis and feedback. **To add Selective Certification for Service Desk Quality Assurance, enter "SDQ" in Section D of the Education and Experience Test.**

62. **Service Desk Supervisory Support**: At least one (1) year of satisfactory, full-time experience supervising staff providing programming, design, development and analysis support in a technical support or Helpdesk environment and quality assurance review. Experience should include, but is not limited to: Microsoft Office Suite, Microsoft Operating Systems, Browser based applications (Siebel, .NET Framework, Java), Adobe Suite, McAfee, Active Directory, Microsoft Deployment Tool Kit, Microsoft GoToASSIST, Remedy, Bladelogic Client Management, and Programming and Configuring Desktop Imaging. **To add Selective Certification for Service Desk Supervisory Support, enter "SSS" in Section D of the Education and Experience Test.**

63. **Service Desk Support**: At least one (1) year of satisfactory, full-time experience providing programming, design, development and analysis for a service desk and/or Helpdesk in a customer service environment. Experience should include, but is not limited to: Microsoft Office Suite, Microsoft Operating Systems, Browser-based applications (Siebel, .NET Framework, Java), Adobe Suite, McAfee, Active Directory, Microsoft Deployment Tool Kit, Microsoft GoToASSIST, Remedy, BladeLogic Client Management, and Programming and Configuring Desktop Imaging. **To add Selective Certification for Service Desk Support, enter "SDS" in Section D of the Education and Experience Test.**

64. **Strategic IT Planning**: At least two (2) years of satisfactory, full-time experience planning strategy and business priorities for an IT service organization in a capacity that includes developing and publishing a strategic planning document and implementing and evaluating its recommendations; conducting operations research; defining plan structure, purpose and audience; identifying and refining goals, objectives and project-based initiatives; designing, producing and publishing a final document; overseeing the progress tracking controls, governance and reporting, and performance assessment involved in implementing a strategic plan. **To add Selective Certification for Strategic IT Planning, enter "680" in Section D of the Education and Experience Test.**

65. **Technical Content Analysis**: At least one (1) year of satisfactory, full-time experience designing, managing and maintaining self-service websites for helpdesk technical support, Web design, photo and graphics editing, user experience design, user interaction design, and information architecture design. **To add Selective Certification for Technical Content Analysis, enter "TCA" in Section D of the Education and Experience Test.**

66. **Technical Environment Review**: At least two (2) years of satisfactory, full-time experience in reviewing and approving technical specifications for hosting environments, including, but not limited to: server operating systems such as Microsoft Windows, Red Hat Enterprise Linux, SUSE Linux Enterprise, and Oracle Solaris; database platforms such as Oracle, MS SQL Server, NoSQL, NewSQL, or various open source databases; technology requirements such as network load balancing rules, firewall rules, storage size and IOPS needs; and network connectivity requirements. **To add Selective Certification for Technical Environment Review, enter "TEM" in Section D of the Education and Experience Test.**

67. **Technical Environment Specification**: At least two (2) years of satisfactory, full-time experience in developing technical specifications for hosting environments, including, but not limited to: server operating systems such as Microsoft Windows, Red Hat Enterprise Linux, SUSE Linux Enterprise, and Oracle Solaris; database platforms such as Oracle, MS SQL Server, NoSQL, NewSQL, or various open source databases; technology requirements such as network load balancing rules, firewall rules, storage size and IOPS needs; and network connectivity requirements. **To add Selective Certification for Technical Environment Specification, enter "TES" in Section D of the Education and Experience Test.**

68. **Technical Software Quality Assurance**: At least one (1) year of satisfactory, full-time experience as a user interface functional tester **and** at least one (1) year of satisfactory, full-time experience as a developer using object oriented programming with tasks including, but not limited to: automated processing of files in various formats like flat files and .csv; XML file format and concept; programmatically handling and parsing XML files for the purpose of automated testing; testing data transformation processes for large amounts of data using ETL tools including Informatica; handling manually and programmatically testing for various integration protocols (e.g., SOAP and REST web services, FTP, MQ); and querying databases using complex SQL queries. All candidates must have gained as part of the required two (2) years of experience at least one (1) year of user experience with OLAP systems (e.g., OBIEE), reporting engine development tasks, execution of prebuilt and ad-hoc queries and testing various reporting objects. **To add Selective Certification for Technical Software Quality Assurance, enter "722" in Section D of the Education and Experience Test.**

69. **Test Automation**: At least one (1) year of satisfactory, full-time experience as a functional tester **and** at least three (3) years of satisfactory, full-time experience in automating functional test cases for applications with browser based user interfaces using UFT/QTP including, but not limited to: test automation methods like recording/parametrization/play back; descriptive programming and manual coding in VBScript; open source test automation tools (e.g., Selenium IDE, Selenium WebDriver); UI object recognition with tools like Object Spy, Firebug, and Chrome Developer; and data driven testing with various file formats like flat files, XML, Excel and SQL for data verification purposes. **To add Selective Certification for Test Automation, enter "ABN" in Section D of the Education and Experience Test.**

70. **Test-Driven Design Development**: At least two (2) years of satisfactory, full-time experience working in a test-driven development environment. The experience should include, but is not limited to: nUnit, Moq, Selenium, Jasmine/Mocha/Sinon, etc. **To add Selective Certification for Test-Driven Design Development, enter "723" in Section D of the Education and Experience Test.**

71. **User Interface/User Experience Design**: At least three (3) years of satisfactory, full-time experience with software interaction design (also called user experience design or information architecture) and graphic design including: visual and UI design for complex, large-scale transactional software implementations; responsive/device-independent web implementations; usability best practices including ADA accessibility, user research, prototyping and user testing; and utilizing communication and visual design software (e.g., Omnigraffle, Visio, Adobe Creative Suite, Microsoft Office, Apple productivity applications). All candidates must provide a design portfolio demonstrating visual and interaction design skills. **To add Selective Certification for User Interface/User Experience Design, enter "UIE" in Section D of the Education and Experience Test.**

72. **VM Ware Engineering (Wintel)**: At least three (3) years of satisfactory, full-time experience in Converged Network Architectures, 10 GB, NFS and/or Cisco Nexus (1k,2k,5k,7k). **To add Selective Certification for VM Ware Engineering (Wintel), enter "744" in Section D of the Education and Experience Test.**

73. **Web Content Management Systems Administration**: At least one (1) year of satisfactory, full-time experience in the installation, configuration, implementation, maintenance and enhancement of Web-Content Management Systems. Examples include, but are not limited to: Apache Web Server, Microsoft IIS, Tomcat, JBOSS, WebLogic, WebSphere, IBM MQ, iWay, FileNet, Documentum, TeamSite, Portal, and Siebel. **To add Selective Certification for Web Content Management Systems Administration, enter "WCS" in Section D of the Education and Experience Test.**

74. **Web Data Operations**: At least two (2) years of satisfactory, full-time experience managing the day-to-day operations of a data sharing tool or portal with tasks including but not limited to: working with business owners to understand and document data requirements; coordinating data delivery among external groups; designing, developing, maintaining and supporting databases or data integration software/tools (e.g. Informatica, MS SSIS, FME); reading and responding to public user feedback; writing, editing, and approving content to be published; and performing data analysis. **To add Selective Certification for Web Data Operations, enter "WDO" in Section D of the Education and Experience Test.**

75. **Web Design**: At least two (2) years of satisfactory, full-time experience in web design, photo and graphics editing, user experience design, user interaction design, and information architecture design, one (1) year of which must have been experience in responsive web design, HTML5 and CSS3. **To add Selective Certification for Web Design, enter "WDE" in Section D of the Education and Experience Test.**

76. **Web Infrastructure System Administration**: At least one (1) year of satisfactory, full-time experience in the installation, configuration, implementation, maintenance and enhancement of Enterprise Integration Bus and its related platforms. Examples include, but are not limited to IBM WebSphere Broker, IBM MQ, IBM DataPower, WebLogic, iWay, and Oracle BPM. **To add Selective Certification for Web Infrastructure System Administration, enter "784" in Section D of the Education and Experience Test.**

77. **Windows Desktop Support**: At least one (1) year of satisfactory, full-time experience in the design, development, implementation, maintenance and enhancement of applications, operating systems and computer imaging in a Microsoft Windows environment. Examples include, but are not limited to: Microsoft Office Suite, Microsoft Operating Systems, Browser based applications (Siebel, .NET Framework, Java), Adobe Suite, McAfee, Active Directory, Microsoft Deployment Tool Kit, SCCM and Bladelogic Client Management. **To add Selective Certification for Windows Desktop Support, enter "WSL" in Section D of the Education and Experience Test.**

78. **Windows Systems Administration**: At least two (2) years of satisfactory, full-time experience administering Windows servers in a large scale environment with Windows 2003/2008/2012 Enterprise Server Platform or more recent version, Active Directory, Microsoft Clustering, and/or Remote Installation Services. **To add Selective Certification for Windows Systems Administration, enter "792" in Section D of the Education and Experience Test.**

The above Selective Certification requirements may be met at anytime during the duration of the list. If you meet this requirement at some future date, please submit a request by mail to: DCAS Bureau of Examinations - Exam Development Group, 1 Centre Street, 14th Floor, New York, NY 10007. Please include the examination title and number, your social security number, and the Selective Certification you are requesting on your correspondence.

Application Receipt: You will be emailed a receipt immediately after you have applied for the examination. If you do not receive this receipt, contact this agency at *OASys@dcas.nyc.gov*. Include your social security number and the examination number and title in your email. You will also be mailed an acknowledgment letter within three months of the last date of the application period. If you do not receive an acknowledgment letter, write to this agency, Attention: Administration, Customer and Exam Support, 1 Centre Street, 14th Floor, New York, NY 10007 to request verification that your application was received. Include your social security number and the examination number and title in your request.

Promotion Test: A promotion examination for this title is being held for eligible City employees. The names appearing on the promotion list will be considered first in filling vacancies.

PENALTY FOR MISREPRESENTATION: Any intentional misrepresentation on the application or examination may result in disqualification, even after appointment, and may result in criminal prosecution.