



INTRODUCTION

The New York State Department of Civil Service developed the IT Test System to give municipal civil service agencies the means to make permanent appointments to a wide variety of IT jobs without delay. These examinations are announced, conducted and scored by the municipal civil service agency. They can be announced either on a regularly scheduled, announced date or on a continuous recruitment basis. All components of the IT Test System are designed to run on a PC.

To use this system effectively it is essential that Civil Service staff work closely on a continuing basis with Information Technology managers. Up-to-date information about activities performed by incumbents is necessary to generate the appropriate examination. Continuing communication will help to insure that the minimum qualifications are clear, job related and realistic. Last but not least, recruitment needs to be viewed as a partnership between the municipal civil service agency and the employing agency.

The IT Testing System can provide you with examinations for hands-on IT titles that include one or more of these functions:

- User Support
- Help Desk
- Computer Programming
- Network Administration
- Data Communications
- Telecommunications
- Business/Systems Analysis
- Web Site Development
- Microcomputer Repair (for jobs not primarily composed of this function)

The IT Test System examinations consist of a weighted rating of training and experience and a qualifying test, both of which will be tailored to the job based on the information obtained on the Information Technology Job Analysis Questionnaire.

The IT Job Analysis Questionnaire

The ITJA Questionnaire (reprinted on pages 8 – 16) is designed to gather information for test development purposes for all IT positions. Information responding to the questions and representing the class as a whole must be gathered. Those responses will allow a determination to be made about the appropriateness of the use of an examination available as part of the IT Test System.

The IT manager(s) who know(s) the job(s) best should assist in the completion of the ITJA Questionnaire. While only one questionnaire, reflecting the class as a whole, must ultimately be finalized, it is important that questionnaires first be obtained from those locations where the class exists so decisions made are based on information representative of the class.

NOTE: On the ITJA Questionnaire, the ranking of importance begins with 1 (for the lowest level) and progresses to 3 (the highest level of importance). Percentages on the ITJA Questionnaire should add up to 100.

Determining if the IT Test System is Appropriate

Although there can be no formula to determine if the IT Test System is appropriate for a given class, a determination can generally be made by reviewing the completed ITJA Questionnaire and answering yes/no to the following questions:

1. Do at least **50%** of the class's responsibilities fall within functions numbered **ONE through NINE**?
2. Do a majority of functions numbered **ONE through NINE** rate a **2 or 3** in importance?
3. Do no more than 50% of the class's responsibilities fall within **Function NINE, Microcomputer Repair**?
4. Do less than 15% of the class's responsibilities fall within the functions numbered **THIRTEEN (project management), FOURTEEN (Supervision); and/or FIFTEEN (Administration)**?
5. Do less than 30% of the class's responsibilities fall within the functions numbered **TEN** through **TWENTY** on the questionnaire and is the importance rating for each one **either 1 or 2**?
6. Do the activities checked under the Help Desk function include at least the first one ("Providing first line diagnosing/trouble-shooting of computer problems...")?



SYSTEM REQUIREMENTS AND INSTALLATION

To run the computerized test program you will need:

- Pentium 90 or higher
- Microsoft Windows 95 or later, or Windows NT 4.0 or later
- 16 MB of random-access memory (RAM)
- 70 MB of free hard disk space
- a CD Rom Drive for installing the computerized test (If a CD Rom Drive is not available, contact the Department of Civil Service, Local Examinations to receive the test on 3½ inch high-density [1.44 MB] disks)
- a video graphics adapter (VGA) capable of displaying at least 256 colors and a screen area of 800 x 600 pixel resolution.

(You must set your PCs to 256 colors or higher before administering any of the IT Test System programs. A screen area of 800 X 600 is required for the ITT&E Questionnaire Programs. The IT Qualifying Test Programs will also operate at 800 X 600 but may be administered with a screen area of 640 X 480.)

- 3½ inch high-density (1.44 MB) disks. The drive into which the disk is placed must be designated the **A** drive. If the 3½ inch drive is other than the **A** drive, the program will not run.

A printer is not required to administer the computerized test. A printer is needed only when you are ready to provide the candidate with a printed notice of test results. At your discretion, you may print the notice at the time of the test or at a later date and then mail it to the candidate.



THE EXAM PLANNER

The Exam Planner program uses the information you enter to generate the following components of the IT testing program for your IT title:

- Subjects of Examination for your Announcement
- IT Training and Experience (ITT&E) Questionnaire
- IT Qualifying Tests

Only authorized personnel in the local Civil Service Agency should use the Exam Planner.

IMPORTANT: Before opening the Exam Planner program, you must have completed the IT Job Analysis (ITJA) Questionnaire. You must also be certain that the IT Testing Program is appropriate for your job title. Refer to Part I of this User Manual for guidelines to determine this. The information that you enter into the Exam Planner will be based on the information on the ITJA Questionnaire for a particular title. The ITJA Questionnaire is designed specifically for the IT Testing Program. **DO NOT** use any other job analysis questionnaire or enter any information into the Exam Planner that is not directly from the ITJA Questionnaire.

Creating the Candidate Disk

The test definition you created in the Exam Planner is used by the ITT&E Questionnaire Program and the Qualifying Test Programs to generate a customized test for your title. The ITT&E Questionnaire will display the functions and activities you selected in the Exam Planner and the Qualifying Tests will be appropriate to the job title as you defined it. Before administering the ITT&E Questionnaire and IT Qualifying tests, you must create an individual candidate disk for each candidate. This disk will serve two purposes. It will:

1. transfer the test definition to the PC on which the test is being administered
2. store the candidate's ITT&E Questionnaire responses and qualifying test results

You must create a separate candidate disk for each candidate.

Creating the disk may be done anytime prior to test administration.



ITT&E QUESTIONNAIRE

Using the ITT&E Questionnaire Program

At the beginning of the ITT&E Questionnaire, candidates are allowed to print the contents of the questionnaire. At the end, they are permitted an additional opportunity to print the completed ITT&E Questionnaire. If the PC on which you are administering the questionnaire is not connected to a printer, you may print this data at a later time and inform the candidates that this information will be mailed to them.

The ITT&E Questionnaire Program works with the Exam Planner to generate a customized questionnaire for any examination that you have created and defined. The Exam Planner enables the ITT&E Questionnaire Program to automatically display the appropriate functions and activities for your title. It even allows the ITT&E Questionnaire Program to produce a single questionnaire that combines two or more examinations.

When the ITT&E Questionnaire Program reads that file, it generates a single ITT&E Questionnaire containing everything necessary for **all** the examinations. Although the administration is consolidated, each examination is defined uniquely, so each one is scored **separately**.



SCORING THE ITT&E QUESTIONNAIRE

Starting the ITT&E Questionnaire Scoring Program

The ITT&E Scoring Program must be administered on a PC that is linked to a printer. The scoring program scores the entries on the candidate disk.

To score paper versions of the ITT&E Questionnaire, see the chapter entitled Data Entry and Revising ITT&E Scores.



DATA ENTRY AND REVISING ITT&E SCORES

If you have elected to prepare a printed copy of the ITT&E Questionnaire and duplicate it for candidates to complete on paper, you will need to use the Data Entry program to do the ITT&E Questionnaire scoring. If you need assistance completing any portion of this program please call the New York State Department of Civil Service, Local Examinations at (518) 457-4487.

The Data Entry Program requires that you enter only the information from the ITT&E Questionnaire that is needed to identify the candidate and compute the final score.

The Test Plans

There are two separate test plans for the **ITQTEST**. Test Plan 1 is for all titles which DO NOT include Help Desk and/or User Support. Test Plan 2 is for positions which include Help Desk and/or User Support.

Test Plan 1 consists of a multiple-choice test for **Logical Reasoning and Interpreting Instructions for Computer-Related Positions** and a simulation test for **Working Effectively with Others to Solve Job-Related Problems**.

Test Plan 2 consists of the same multiple-choice test for **Logical Reasoning and Interpreting Instructions for Computer-Related Positions** and simulation test for **Working Effectively with Others to Solve Job-Related Problems**, plus an additional simulation test for **User Support and Training**.

The entire **ITQTEST** consists of the following parts:

For both Test Plans 1 and 2

1. Multiple-Choice Test Animated Instructions – 5 minutes
2. Sample Multiple-Choice Test – maximum of 15 minutes
3. **Logical Reasoning and Interpreting Instructions for Computer-Related Positions multiple-choice test** – maximum of 90 minutes
4. Simulation Test Animated Instructions – 5½ minutes
5. Sample Simulation Test – maximum of 20 minutes
6. **Working Effectively with Others to Solve Job-Related Problems simulation test** – maximum of 30 minutes

For Test Plan 2 only 1 through 6 above and

7. **User Support and Training simulation test** – maximum of 30 minutes



SCORING THE QUALIFYING TESTS

Scoring the Test

You may score the tests immediately and provide results to the candidates immediately, or you may score them later and notify candidates by mail.



Scoring Instructions for the ITT&E Questionnaire

1. Total the values you entered for the first function. In the example on the right for Computer Programming the total is **11**
2. Find the highest possible score for the function. To do this, multiply the number of activities by 3. In this example the highest possible score for Computer Programming is:

1. 7 X 3 or 21

3. Divide the total of your values by the highest possible score. For the Computer Programming example:
11/21 or 0.5238
4. Multiply this result by the weight of the function and round to 2 decimal places. The weight for Computer Programming is 2, so:
0.5238 X 2 or 1.0476
Round to 2 decimal places. In this example, the result is 1.05

5. Do the same thing for each function. The total for the second function in the example to the right, Business/Systems Analysis, is:
8/15 X 1 or 0.5333 Round to 0.53
6. Find the sum of the weighted values for all the functions. Total weighted values for this example:
1.05 + 0.53 = 1.58
7. Find the sum of the function weights for all the functions. Total function weights for this example:
2 + 1 = 3

8. Determine the Raw Score by dividing the total weighted values by the total weights, rounding to 2 decimal places and multiplying by 40.
1.58 / 3 = 0.5266 Round to 0.53
0.53 X 40 = 21.2

9. Find the Raw Score in the Banding Table below:

| | | | | |
|-------------|-----------|-------------|----------|------------|
| 30.1 | to | 40.0 | = | 100 |
| 20.1 | to | 30.0 | = | 90 |
| 10.1 | to | 20.0 | = | 80 |
| 0.00 | to | 10.0 | = | 70 |

For this example, the converted score is 90.

10. If you are scoring a Promotion Examination, you must include Seniority Credits in the Final Score. Seniority Credits are added to the Raw Score and the result is then banded using the Banding Table in 9. above. For example, to add 4 seniority credits to the example above:
21.2 + 4 = 25.2 The converted score remains 90.
11. Veteran's Credits are added to the converted score and they are determined in the following manner.

For Open Competitive Examinations:
 Non-Disabled Credits = 5
 Disabled Credits = 10

For Promotion Examinations:
 Non-Disabled Credits = 2.5
 Disabled Credits = 5

If this example is a Promotion Examination and the candidate is a Non-Disabled Veteran, the Final Score is **90 + 2.5 = 92.5.**

ACTIVITIES:

Computer Programming (Weight: 2)

- 1 Developing the logic of a computer program based on program specifications, flowcharts and other documentation.
- 2 Writing program instructions (code) in a specific programming language
- 2 Preparing sample test data and debugging the program code
- 1 Testing the program and user documentation and operator instructions
- 3 Developing program and user documentation and operator instructions
- 1 Developing reports, preparing data for export, establishing procedures for importing of data
- 1 Analyzing communications requirements with other software

Business/Systems Analysis (Weight: 1)

- 1 Consulting with Users to ascertain required project scopes and results
 - 2 Analyzing work procedures to identify those which are adaptable to computer applications
 - 3 Preparing workflow diagrams and structuring charts to define workflow processes
 - 1 Developing models that document data stored and work processes performed
- Defining interface and communications requirements

| | |
|------|---------------------------|
| 1.05 | Computer Programming |
| 0.53 | Business/Systems Analysis |

| | |
|------|--|
| 1.58 | Total of Weighted Values |
| 3.00 | Total of Weights |
| 21.2 | Raw Score (Weighted Values / Weights X 40) |

| | |
|----|---|
| 90 | Converted Score (Without Sr. Crdts or Vets Crdts) |
|----|---|

**NEW YORK STATE
DEPARTMENT OF CIVIL SERVICE
IT JOB ANALYSIS QUESTIONNAIRE**

The purpose of this questionnaire is to help determine the best way to test for your IT job.

JOB TITLE _____

JURISDICTION _____

QUESTIONNAIRE DUE DATE _____

The questionnaire should be completed by the IT supervisor or manager who knows the job best.

Persons completing the questionnaire should consider the duties of all of the positions with this title in their jurisdiction.

DIRECTIONS

1. Job activities have been grouped under 20 functions. Place a check (✓) at the LEFT of each activity that is typically performed by the incumbent(s) in the title.
2. After you have checked all of the appropriate activities, turn to the last page.

1. Computer Programming

- ___ Developing the logic of a computer program based on program specifications, flowcharts and other documentation
- ___ Writing program instructions (code) in a specific programming language
- ___ Preparing sample test data and debugging the program code
- ___ Testing the program within the overall system with sample and actual data and making modifications
- ___ Developing program and user documentation and operator instructions
- ___ Developing software that operates on multiple platforms (mainframe, midrange, PCs, laptops, Personal Data Assistants (PDAs), etc.) as needed
- ___ Developing reports, preparing data for export, establishing procedures for importing of data
- ___ Analyzing communications requirements with other software
- ___ Preparing data for display on the other media (Internet, Intranet, PDAs, laptops, etc.)
- ___ Troubleshooting with application software vendors for user/system problem resolution

2. Help Desk

- ___ Providing first-line diagnosing/trouble-shooting of computer problems relating to software packages, basic hardware issues, security and password problems
- ___ Arranging with service providers for repair of desktop, laptop and Personal Data Assistants (PDAs), computer hardware, desktop, laptop and PDA computer operating system software and peripheral equipment
- ___ Referring questions and problems involving computer hardware, connectivity, software and peripheral equipment associated with the computer system to the appropriate specialist
- ___ Conducting follow-up checks to ensure that problems are resolved to each staff/customer's satisfaction
- ___ Coordinating problem-solving efforts regarding terminals and data communication lines with vendors and systems users

3. User Support

- ___ Developing and implementing ongoing needs assessment of both individuals and organization to identify types and contents of training
- ___ Providing staff/customers with training in the use of computer hardware/software and related topics
- ___ Providing in depth support for specific applications

4. Network Administration

- ___ Designing, installing, configuring and upgrading LANS/WANS, including repeater hubs, switches, routers and any other network component
- ___ Evaluating network methodologies
- ___ Implementing telecommunication networks and making necessary recommendations for changes in networks
- ___ Maintaining and implementing internet, intranet, and extranet systems/servers
- ___ Managing and administering servers and server utilization
- ___ Consulting with vendors and users regarding the need for hardware/software for network servers
- ___ Maintaining network architecture and design
- ___ Providing technical assistance in resolving and repairing network problems and network equipment
- ___ Installing and configuring individual PC's, laptops and PDAs to domains/LANS
- ___ Planning, implementing, supporting, monitoring, and securing network components and performance, including forms of communications and interfaces

5. Data Communications

- ___ Designing, planning and implementing LAN/WAN connectivity
- ___ Supporting data connectivity equipment
- ___ Managing Internet and e-mail usage
- ___ Maintaining data connectivity security
- ___ Determining network costs

6. Telecommunications

- ___ Tracking and managing telecommunications infrastructure
- ___ Employing and supporting land-based phone lines, fiber optics and wireless networks
- ___ Designing and implementing voice systems
- ___ Troubleshooting voice systems problems and providing technical assistance to repair telecommunication problems
- ___ Analyzing voice system proposals
- ___ Applying telecommunications interface capabilities to data networks
- ___ Determining solutions for requests for new and changing services

7. Business/Systems Analysis

- ___ Consulting with users to ascertain required project scopes and results
- ___ Analyzing work procedures to identify those which are adaptable to computer applications
- ___ Performing cost benefit analysis and feasibility on computer applications
- ___ Devising/applying plans to upgrade from manual methods to computerized systems
- ___ Preparing workflow diagrams and structuring charts to define workflow processes
- ___ Developing models that document data stored and work processes performed
- ___ Defining interface and communications requirements
- ___ Consulting with vendors to ascertain the products available to meet the customers needs
- ___ Performing as a liaison between the customer and vendor personnel that support purchased software
- ___ Processing software trouble reports and analyzing the system to determine possible problem areas
- ___ Working on complex reporting requirements and providing data extraction and analysis for software purchased from an outside vendor
- ___ Recommending hardware and software to meet user needs

8. Web Site Development

- ___ Researching how to use the World Wide Web to meet needs and goals
- ___ Planning, developing, securing and implementing web sites
- ___ Developing strategies to utilize e-commerce and securing exchanges of monies
- ___ Providing writing, photography and design services for web sites
- ___ Integrating databases into web sites
- ___ Training others to plan, develop and implement web pages
- ___ Developing strategies to market web site services
- ___ Performing statistical analyses on web site usage data

9. Microcomputer Repair*

- ___ Diagnosing and repairing desktop and laptop PCs and Personal Data Assistants (PDAs), computer hardware and peripheral equipment
- ___ Installing, configuring and maintaining desktop, laptop and PDA computer hardware, associated operating system software and peripheral equipment
- ___ Developing and implementing preventive maintenance schedules
- ___ Training others to install, configure and maintain desktop, laptop and PDA computer hardware, associated software and peripheral equipment
- ___ Monitoring maintenance contracts
- ___ Testing and evaluating new desktop computer hardware, associated operating system software and peripheral equipment

*The terms "microcomputer" and "personal computer" (PC) are used interchangeably. Computer hardware and peripheral equipment include motherboards and buses, magnetic and optical storage devices, input devices and printers.

10. Operation of Mainframe Computer or Minicomputer and Related Peripheral Equipment

- Operating a MAINFRAME COMPUTER for production work on a regular, routine basis
- Operating a MINICOMPUTER for production work on a regular, routine basis
- Mounting and dismounting reels of magnetic tape
- Loading and unloading magnetic tape cartridges
- Setting up and loading paper into printer(s)
- Checking output for completeness and accuracy
- Entering, interpreting and responding to console messages
- Analyzing machine stops and taking appropriate action
- Adjusting job stream as necessary to resolve problems
- Performing prescribed routine daily maintenance
- Contacting programmers or other staff in case of program malfunctions
- Contacting repair service when equipment malfunctions
- Operating remote job entry terminals (RJE)
- Operating computer primarily in special situations and/or for instructional purposes
- Other (please specify):

11. Operation of Microcomputer* and Related Peripheral Equipment

- Operating a microcomputer and peripheral equipment for production work on a regular, routine basis
- Using computer in word processing mode
- Using database management software
- Using spreadsheet software
- Using graphics software/hardware
- Using data communications hardware/software
- Changing documents/forms using existing software
- Operating dot matrix, ink jet and/or laser printers
- Performing routine minor operator preventive maintenance
- Entering new data and/or edits existing data
- Other (please specify):

12. Development and Maintenance of Computer Center Work Schedules

- Adjusting job stream to handle problem runs, special runs or system failures
- Scheduling and, when necessary, rescheduling work on one or more shifts
- Developing and/or maintaining employee work schedules for a computer installation
- Other (please specify):

* The terms "microcomputer" and "personal computer" (PC) are used interchangeably.

13. Management of Computer Projects

- Assigning personnel to projects and directing their activities
- Providing technical guidance, assistance and/or training to project staff
- Conducting project staff meetings
- Preparing project schedules and monitoring progress
- Preparing workload and progress reports related to assigned projects
- Establishing procedures for performing/modifying project tasks
- Studying technical problems and recommending solutions
- Other (please specify):

What is the typical number of project staff? _____

14. Supervision of the Work of Others

- Planning, organizing and controlling work activities of subordinate staff
- Assigning and reviewing subordinates' work
- Maintaining work standards and providing on-the-job training
- Providing technical guidance and assistance to subordinates
- Assisting subordinates in the solution of complex problems such as design concepts, program writing or debugging

Please indicate the following:

Is this position that of a first-line supervisor? Yes ___ No ___

If yes, how many subordinates are supervised? _____

Please check the type(s) of position supervised: ___ clerical ___ technical ___ other

Is this position that of an administrative supervisor who directs the activities of others through an intervening layer of subordinate supervisors? Yes ___ No ___

If yes, how many subordinate supervisors? ___ and how many employees per supervisor? ___

15. Direction (Administration) of an Organization or Subdivision

- Developing goals and objectives for an agency or a portion of an agency
- Formulating and implementing policies and making independent judgments
- Establishing short- and long-range plans
- Defining lines of authority and responsibility and fostering staff development
- Managing teams of staff to meet specific project goals
- Developing budgets
- Other (please specify):

16. Planning, Organization and Control of the Activities of a Computer Center

- Planning, directing and coordinating the delivery of computer services
- Developing information technology methods, procedures, standards and controls
- Establishing and evaluating departmental procedures and policies
- Evaluating and coordinating new applications or modifications
- Resolving operational problems identified by subordinate staff
- Determining personnel policies, resolving staff problems and staff evaluation
- Providing administrative and technical assistance to subordinate computer center staff
- Evaluating equipment requirements and analyzing their capabilities for purchase or replacement
- Monitoring the development and implementation of application systems
- Consulting with department heads on data processing needs
- Supervising (directly responsible for) (check one or more):
 - Applications Programming
 - Computer Operations
 - Systems Programming
 - Data Entry/Data Control
 - Other: _____
 - Data Base Administration
 - Data Communications
 - Office Automation
 - Systems Analysis/Design

17. Provision of Training for Users of Computers

- Assessing training needs of staff and/or students
- Selecting training methods to be used
- Instructing staff or students in a formal classroom setting
- Instructing staff or students on a one-to-one basis
- Evaluating training programs for effectiveness and recommending changes
- Developing and/or reviewing user manuals, training materials and related forms
- Investigating, reviewing and recommending software packages for training purposes
- Directing others who develop/deliver training services
- Other (please specify):

What is a typical number of participants trained at any given time? _____ (May be expressed as a range, e.g., 1-3 participants.)

18. Operation of a Microcomputer* Laboratory in a School

- Helping students and teachers use microcomputers, applications and related equipment
- Recommending microcomputer equipment and applications for use in the laboratory
- Previewing new applications and equipment and learning how to use them
- Demonstrating new or upgraded applications and/or equipment to teachers and/or staff
- Establishing and maintaining an inventory of applications, equipment and supplies
- Maintaining and, if possible, repairing microcomputer equipment in the laboratory
- Other (please specify):

* The terms "microcomputer" and "personal computer" (PC) are used interchangeably.

19. Integration of Educational Technology into Schools

- _____ Assessing and identifying school district educational technology needs
- _____ Researching and evaluating educational technology and/or software packages
- _____ Developing a strategy for integrating technology into the curriculum
- _____ Providing technical assistance to implement, support and/or evaluate educational technology programs
- _____ Organizing and conducting educational technology related awareness sessions for teachers and staff
- _____ Operating and administering a distance learning network
- _____ Other (please specify):

20. Management of Projects in an Educational Setting

- _____ Developing project proposals, cost estimates, timelines and schedules
- _____ Preparing specifications for hardware and software acquisitions
- _____ Scheduling system acquisition, installation, validation, testing and training
- _____ Assuring that contracted work is completed as specified
- _____ Leading status meetings and providing status reports as needed
- _____ Other (please specify):

21. Additional Major Function:

Typical work activities:

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

Attach additional sheets as necessary.

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In the column marked "Relative Importance," please indicate the relative importance of each function for which you have checked activities to successful performance of the job. Take into account the amount of time spent and criticality to the job:

- Enter a "1" for function(s) that are moderately important to the overall job performance.
- Enter a "2" for function(s) that are more important to overall job performance than the function(s) you designated with a "1."
- Enter a "3" for function(s) that are considerably more important than the moderate function(s) and more important than the function(s) you designated with a value of "2".

NOTE: If the job entails only one function, or if all functions of the job are of equal importance, the "Relative Importance" should be "1."

| <u>Functions</u> | <u>Relative Importance</u> | <u>% Time</u> |
|-------------------------------------|----------------------------|---------------|
| 1. Computer Programming | _____ | _____ |
| 2. Help Desk | _____ | _____ |
| 3. User Support | _____ | _____ |
| 4. Network Administration | _____ | _____ |
| 5. Data Communications | _____ | _____ |
| 6. Telecommunications | _____ | _____ |
| 7. Business/Systems Analysis | _____ | _____ |
| 8. Web Page Development | _____ | _____ |
| 9. Microcomputer Repair | _____ | _____ |
| 10. Mainframe Operation | _____ | _____ |
| 12. Computer Center Work Scheduling | _____ | _____ |
| 13. Project Management | _____ | _____ |
| 14. Supervision | _____ | _____ |
| 15. Administration | _____ | _____ |
| 16. Computer Center Management | _____ | _____ |
| 17. Training | _____ | _____ |
| 18. Microcomputer Laboratory | _____ | _____ |
| 19. Educational Technology | _____ | _____ |
| 20. Education Project Management | _____ | _____ |
| 21. Additional Function | _____ | _____ |

Printed Name and Title of IT Supervisor/Manager Completing Questionnaire

IT Supervisor/Manager's Signature

_____/_____/_____
Date Questionnaire Completed