IFPUG Certification Preparation Training Course

Instructor: David Longstreet
David@SoftwareMetrics.Com
www.SoftwareMetrics.Com
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INTRODUCTION

Effective teachers and trainers of adults become partners in the process of teaching and learning. Adult learners come to learning with discrete and distinct wants and needs. Additionally, students should come with a background in Function Point Counting and Analysis. Each student has a reservoir of experience, which is a rich resource for learning. The course is not designed so an instructor flips overheads for a day. Nor is the course designed as just review of practice exams. The course is designed using adult education principles and following techniques used to prepare students for the GRE and other standardized tests.

Enhancements in Adult Education

The primary problem with adult education, it is generally technical and the subject material is dry – Function Point Analysis is no exception. Many things can be done to enhance the learning process. It is possible to enhance motivation by offering the following:

Maintaining Attention

- Course provides frequent drills and reviews.
- Instructor helps students understand they are accountable for what they will learn.
- The instructor uses humor liberally and frequently.
- Selectively use breaks and physical exercises.

Building Interest

- Use of creative examples, analogies and metaphors.
- Use of questions to stimulate interest.
- Clearly stated objectives and expected results from each section.

Transfer of Function Point Knowledge

- Course is designed so challenge is an active part of course.
- Use of sample “type” questions.
- Use of essay format questions.

Build Standardized Test Taking Skills

- Build confidence by avoiding confusing examples and controversial issues.
- Provides testing tips and ideas.
• Provides effective strategies.

Below is a series of Icons used throughout the document. Icons are provided to assist in providing the student a road map.

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<tr>
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<td>Indicates a timed section (drill). You will be required to complete the section in a prescribed time frame.</td>
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<td><img src="image" alt="Stop Sign" /></td>
<td>Indicates the end of a self directed section. Please wait until the instructor provides additional instruction before moving to the next section.</td>
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<td><img src="image" alt="School" /></td>
<td>Indicates an instructor lead section.</td>
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**WARM UP EXERCISE**

**Objective:**
To encourage the student to use the function point manual as a tool during the certification exam. It will be important to quickly find the definitions of any terms that you may not know during the certification exam.

**Expected Result:**
The student should feel comfortable with the Table of Contents, Index and Glossary of the Counting Practices Manual 4.1.

**The Exercise:**
Like all exercises, the warm up exercise is timed. Timed exercises will improve your ability to work quickly on the actual certification exam.

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<td>The sentence, “An external output may also maintain one or more ILFs and/or alter the behavior of the system.”</td>
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<td>The bold words, “is not maintained.”</td>
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**STOP**
BASIC QUESTION TYPES

Single Choice - must find the best answer relative to the other possible answer

1. Which is rated higher?
   a) A high external input
   b) A high external output
   c) A high external interface file
   d) A high internal logical file

Some of the above (both a and b) – must examine both possible answers.

1. Which is rated higher?
   a) A High External Input
   b) A High External Inquiry
   c) A Low External Output
   d) both a and b are rated the same.

All of the Above - must find at least two true answers. If two of the choices are true, by default the answer must be All of the Above. There is no point to continue to examine the third possible choice.

Please answer the following question by choosing the best answer.

1. Which of the following are true statement
   a) Function Points measures functionality the user requests and receives.
   b) Measures software development and maintenance independently of technology used for implementation.
   c) There is life on other planets
   d) All of the above are true statements.

2. Who is the smartest person alive today?
   a) Albert Einstein
   b) Isaac Newton
   c) David Longstreet
   d) Sigmund Freud
TYPICAL TEST QUESTIONS

Objective:
To introduce the student to the typical questions on the IFPUG Exam.

Expected Result:
Become familiar with the questions.

1. What characteristic makes an external input unique?
   a) only component that maintains an internal logical file.
   b) references an internal logical file or external interface file
   c) action keys are counted as data element
   d) none of the above

2. What characteristic makes an external output unique?
   a) contains derived data
   b) only component that has an input-output combination
   c) references an internal logical file or external interface file.
   d) none of the above

3. What characteristic makes an internal logical file unique?
   a) contains logical information
   b) is rated based upon record element types and data element types
   c) is maintained within the application boundary
   d) none of the above

4. What characteristic makes an external interface file unique?
   a) contains logical information
   b) is rated based upon record element types and data element types
   c) is maintained outside the application boundary
   d) none of the above
5. An application has an external input with 4 DET’s and 2 FTR’s, an external output with 8 DET’s and more than 3 FTR’s, an internal logical file with 2 RET’s and 25 DET’s, and an external interface file with 1 RET and 5 DET’s. What is the unadjusted function point count?
   a) 22
   b) 23
   c) 28
   d) none of above

6. What is the value of an external inquiry that has 20 data elements and 3 file types referenced?
   a) 3
   b) 4
   c) 6
   d) none of the above

7. What characteristic makes an external inquiry unique?
   a) references an internal logical file or external interface file
   b) never has derived data
   c) contains edits, algorithms and calculations.
   d) none of the above

8. Processing logic for an external input is defined as:
   a) edits, algorithms and calculations
   b) a reference to an internal logical file or external interface file
   c) sorting of data
   d) both a and b

9. Processing logic for an external output is defined as:
   a) edits, algorithms and calculations
   b) a reference to an internal logical file or external interface file
   c) is the same as an external input
   d) all of the above

10. A file type referenced for an external input is defined as
    a) a internal logical file that is maintained by the external input.
    b) a internal logical file that is referenced by the external input
    c) a external interface file that is referenced by the external input
    d) all of the above
HARDEST TYPE OF QUESTIONS

Objective:
The following questions represent the most difficult types of questions that will be on the exam. It is important that you become familiar with answering these types of questions.

Expected Result:
The student should obtain a score of 90 percent.

The Exercise:
Like many exercises, this section is timed. Timed exercises will improve your ability to work quickly on the actual certification exam.
Your time limit is 20 Minutes.

1. Which is rated higher?
   a) An low external input
   b) An low external inquiry
   c) An low internal logical file
   d) An low external interface file

2. Which has the highest numerical value
   a) an internal logical file with 52 data elements
   b) an external interface file with 52 data elements
   c) an external input with 3 FTR’s and 10 DETs’
   d) not enough information

3. Which has the lowest numerical value
   a) an external inquiry with 1 DET.
   b) an external output with 4 FTR’s
   c) an external input with 1 FTR
   d) not enough information

4. What is the unadjusted function point count for an application with 3 low external inputs, 3 low external outputs, and 1 high internal logical file.
   a) 36
   b) 34
   c) 37
   d) none of the above
5. Which is considered to have the highest numerical value?
   a) an external input rated as high
   b) an external output rated as low
   c) an external inquiry rated as high
   d) both a and c have the same numerical value

6. Which is considered to have the lowest numerical value?
   a) a high external output
   b) a low internal logical file
   c) a average external interface file
   d) all have the same value

7. An enhancement project has 5 new low external inputs, 3 external inputs that changed from low to high, 1 new low internal logical file, and 1 modified internal logical file (that remained an average before and after). What is the function point count for this enhancement project? (assume VAF remains the same).
   a) 45
   b) 50
   c) 55
   d) none of the above

8. Using the previous question, how many function points were added to the baseline application?
   a) 50
   b) 45
   c) 15
   d) none of the above

9. Which has the highest numerical value
   a) a external interface file with 25 DET’s and 2 RET’s
   b) an internal logical file with 5 DET’s and 1 RET’s
   c) an external output with 10 DET’s and 4 FTR’s.
   d) all have the same numerical value

10. Which has the highest numerical value
    a) An internal logical file with 15 data elements and 5 record types.
    b) An external input with 35 data elements and 10 FTR’s
    c) An external interface file with 25 data elements and 5 record types
    d) both a and c are have the highest and same numerical value.
11. What is the adjusted function point count for an application with 10 average internal logical files, 5 high external interface files, and 5 external outputs.
   a) 175
   b) 150
   c) 125
   d) none of the above

12. Which has the lowest numerical value
   a) an external output with 3 FTR’s and 15 DET’s
   b) an external input with 2 FTR and 10 DET’s
   c) an external output with 2 FTR and 4 DET’s
   d) both b and c have the same value.
GSC & FORMULA QUESTIONS

Objective:
The following questions represent typical questions regarding GSC’s that will be on the exam. It is important that you become familiar with answering these types of questions.

Expected Result:
The student should obtain a score of 90 percent.

1. The range of Value Adjustment Factor is
   a) 0 to 5
   b) Plus or Minus 35%
   c) Plus or Minus 35
   d) None of the above

2. A system has special processor requirements where is this applied
   a) Heavily Used Configuration
   b) End-User Efficiency
   c) On line Update
   d) Complex Processing

3. An application was specifically packaged and/or documented to ease reuse, and the application is customized by the user at source code level where is this applied?
   a) Operational Ease
   b) Reusability
   c) Installation Ease
   d) Facilitate Change

4. If 8% -15% of an applications transactions are online, then the impact to the TDI would be:
   a) 1
   b) 2
   c) 3
   d) 4

5. If all the general system characteristics have an average degree of influence, then what is the value adjustment factor?
   a) 1.00
   b) .42
   c) 1.07
   d) 3

6. Multilingual support in the End User Efficiency GSC counts as
   a) 4 items
b) 5 items
c) 6 items
d) has no impact in the GSC

7. Which GSC would be impacted by the user requirement that an application be developed for both PC and Macintosh Environments
   a) Multiple Sites
   b) On line Update
   c) Complex Processing
   d) None of the above

8. A system has daily peak transactions. Where do you apply this?
   a) Transaction Rate
   b) Heavily Used Configuration
   c) Performance
   d) Installation

9. What satisfies more than one user’s need?
   a) installation ease
   b) operational ease
   c) reusability
   d) facilitate change

10. If all the GSC’s scored as significant then the value adjustment factor would be:
    a) 1.00
    b) 1.07
    c) 1.21
    d) 1.35

11. If an application anticipates daily peak transaction volumes, then the impact to the TDI would be a:
    a) 1
    b) 2
    c) 3
    d) 4

12. The statement, “Application is batch but has remote data entry and remote printing” is found in which GSC.
    a) Distributed Data Processing
    b) Performance
    c) Transaction Rates
    d) Data Communications
13. If an application includes Extensive logical processing and Extensive mathematical processing, then the impact to the TDI would be:
   a) 1
   b) 2
   c) 3
   d) 4

14. If during installation an application requires no special setup, then the impact to the TDI would be:
   a) 1
   b) 2
   c) 3
   d) none of the above

15. Which of the following are counted as two items when considering the appropriate GSC.
   a) Effective start-up, back-up, and recovery processes were provided, but no operator intervention is required
   b) Multilingual support
   c) Flexible query and report facility is provided that can handle requests of average complexity, for example, and/or logic applied to more than one internal logical file.
   d) Both a and c
EI, EO, EQ QUESTIONS

Objective:
The following questions represent typical questions regarding transactions that will be on the exam. It is important that you become familiar with answering these types of questions.

Expected Result:
The student should obtain a score of 90 percent.

1. A user has the ability to add, change, and delete employee name, employee salary, employee location on a single table. How many unadjusted function points does this represent.
   a) 3
   b) 4
   c) 9
   d) 12

2. An external input has 2 data elements. How many files need to be referenced for it to be rated as a high?
   a) 1
   b) 2
   c) 10
   d) it can never be rated as a high EI

3. Derived Data for an external output is
   a) Transformation of existing data
   b) Algorithms
   c) Calculations
   d) all are examples of derived data

4. An external output has 21 data elements. How many files need to be referenced for it to be rated as a high?
   a) 1
   b) 2
   c) 4
   d) both b and c

5. The difference between an EQ and EO
   a) An EQ has an input and output side
   b) An EO has derived data
   c) An EO can update and internal logical file
   d) Both b and c
6. Information is sent outside the application boundary, it does not contain any derived data, and does not update any internal logical files and contains no calculations.
   a) This information would be counted as an EO.
   b) This information would be counted as an EQ.
   c) This information would be counted as an EI.
   d) This information would be counted as an ILF.

7. All of the following rules apply for counting DET’s except
   a) Count user recognizable, non-repeated fields
   b) Count one DET for the ability to specify an action to be taken even if there are multiple methods for invoking the same action.
   c) Do not count literals as DET’s
   d) The entire above are valid rules.

8. An external output is available on fiche, paper and on line and processing logic is different for each one. How many EQ’s are counted.
   a) 1
   b) 2
   c) 3
   d) Not enough information.

9. An input screen allows a user to add the following information, employee name, employee job title, employee job location, and employee salary. There is an add button that saves the information to a file. An error message appears if any of the fields have been incorrectly populated. How many data elements are there?
   a) 4
   b) 5
   c) 6
   d) 7

10. An external input references 3 FTR’s how many DET’s are needed for it to be valued at 6.
    a) 3
    b) 6
    c) 16
    d) both b and c

11. An implied inquiry
    a) Does not have a visible input side
    b) During an EI add validates information.
    c) Updates and ILF
    d) both a and c

12. A notification message
    a) Must contain derived data
    b) Can contain a calculation that is not visible.
c) A notification message does not have to cross the boundary
d) Both a and b

13. When entering information regarding customers the following fields must be entered: Customer Name, Address, City, State and Zip Code. There are additional tax fields that must be entered before a customer is considered added.
   a) Only the first 5 fields are considered for the EI.
   b) The tax fields and the 5 fields are considered for the EI
   c) Only the tax fields are considered for the EI
   d) These would be treated as two separate EI’s

14. All are considered processing logic for an external inquiry except
   a) One or more ILF are updated
   b) Mathematical formulae’s are performed
   c) Derived Data
   d) None of the above are considered processing logic for an EQ.

15. During the processing of an EI “total fields” are displayed. The total fields are summations of information input by the user. The calculation is made prior to saving the information to an ILF. The “total fields” are calculated and saved with the EI.
   a) The total fields are counted as additional data elements
   b) The total fields are not counted as data elements
   c) This is really an EO because an EI can not have derived data
   d) None of the above are correct

16. An External Output has a calculated total field. This total field changes color from black (if it is positive) and red (if it is negative). The changing of color is user required.
   a) This changing color functionality is considered an additional data element.
   b) The changing color functionality is not considered an additional data element.
   c) The changing color functionality is control and does impact this EO.
   d) None of the above

17. An application has an external input with 4 DET’s and 2 FTR’s, an external output with 8 DET’s and more than 3 FTR’s, an internal logical file with 2 RET’s and 25 DET’s, and an external interface file with 1 RET and 5 DET’s. What is the unadjusted function point count?
   a) 22
   b) 23
   c) 28
   d) none of above
18. The possible values for an external output that references 1 file?
   a) 4 or 5
   b) 5 or 7
   c) 7 or 10
   d) both a and b

19. What is a DET for an External Output?
   a) Derived data that exists the boundary
   b) Information that is read from an ILF
   c) Information that is read from an EIF
   d) all of the above can be a DET for an EO

20. An EQ has a message that displays the text, “searching”
   a) Would be counted as a DET
   b) Would be treated as a confirmation message
   c) Would not be counted as DET because an EQ can not have confirmation
      messages and error messages
   d) Both and b

21. What is the primary difference between an error message and a notification message.
   a) An error message is not an elementary process but part of another elementary
      process
   b) A notification message is an elementary process
   c) Both a and b
   d) An error and notification message are the same thing.
ILF/EIF QUESTIONS

Objective:
The following questions represent typical questions regarding data functions that will be on the exam. It is important that you become familiar with answering these types of questions.

Expected Result:
The student should obtain a score of 90 percent.

1. An ILF is updated by three separate applications (A,B and C) -- where is it counted?
   a) in the largest application
   b) in the application where it is used the most
   c) in all three applications
   d) in the smallest application

2. An EIF with 19 data elements and 3 record types would be rated as:
   a) Low
   b) Average
   c) High
   d) not enough information

3. Application A has a master file, that contains parts inventory information. Application B uses parts as an EIF. Application A counts Parts as:
   a) ILF
   b) EIF
   c) ILF and EIF
   d) None

4. An ILF has 30 DET’s, what is the maximum number of unadjusted function points for this ILF.
   a) 7
   b) 10
   c) 15
   d) not enough information

5. A ILF with 6 RET’s would be rated
   a) Low
   b) Average
   c) High
   d) Could be both b and c, but not a

6. The term maintained is the ability
   a) to modify data through an elementary process.
   b) add, change and delete information on an ILF
c) add, change and delete information on an EIF

d) All of the above

7. Information about employees are maintained within the application boundary. Employee ID, Employee Name, Employee Mailing Address, Employee Pay Grade, Employee Job Title are all maintained. There are additional fields regarding Mailing Address (Floor, Building Code, Street, City, State, Zip). These fields are not maintained separately. How many Data Elements and Record Element Types are considered?

a) 6 Det and 1 Ret
b) 11 Det and 2 Ret
c) 6 DET and 2 Ret
d) None of the above

8. An EIF has 1 RET the maximum number of unadjusted function points that this EIF can have is:

a) 5
b) 7
c) 10
d) None of the above

9. An EIF with 6 RET and 30 DET’s and an ILF 3 RET’s and 52 DET’s

a) Would both be rated as a Average
b) Would both be rated as a Low
c) Would both be rated as a High
d) Not enough information

10. All are rules for an EIF except

a) The group of data is maintained in an ILF of another application.
b) The group of data is referenced by, and external to, the application being counted.
c) The group of data or control information is logical and user identifiable.
d) All of the above are valid rules.
11. The designers were able to combine three user-derived groups of data into one flat file. How many ILF’s are counted?
   a) 0
   b) 1
   c) 2
   d) 3

12. A RET is can be:
   a) Optional subgroups of data
   b) Mandatory subgroups of data
   c) Both A and B
   d) Neither A nor B

13. “Help” is maintained outside the application boundary, but used by the application being counted. The help file
   a) Is only counted as an EIF
   b) Is counted as an EIF and at least one EQ
   c) Is counted only as and EQ
   d) Is counted as both an EI and EQ
14. Application A maintains an ILF that is also maintained by Application B. Application A should.
   a) count 1 EIF and 1 ILF
   b) count only 1 ILF
   c) count 0 ILF and 0 EIF
   d) count as 2 ILF’s

15. Calculated values that are stored
   a) Are counted as DET’s on an ILF
   b) Are counted as DET’s on an EIF
   c) FTR’s can not have stored calculated values
   d) Both A and B

16. The unique characteristic of an EIF is that
   a) it exists within the boundary of the application, but not maintained by the application.
   b) The group of data is not maintained by the application
   c) The group of data is an ILF for another application.
   d) both b & c

17. Which of the following is the best description of an internal logical file.
   a) a user group of related information.
   b) a user group of related information maintained within the application boundary.
   c) a user group of related information maintained outside the application boundary.
   d) none of the above.

18. The primary difference between an external interface file and an internal logical file is:
   a) an external interface file is the same as a external input.
   b) an internal logical file is maintained within the application boundary and an external interface file is maintained outside the boundary.
   c) an internal logical file can be maintained by many applications and an external interface file maintained by only one application.
   d) none of the above.

19. A data element on an Internal Logical File and External Interface File
   a) can be a recursive field
   b) is a non recursive field
   c) is user recognizable
   d) both a & c

20. An ILF is referenced by three other applications
   a) Only one application can consider the ILF as an EIF
   b) All three applications would consider the ILF as and EIF
   c) All three applications would consider the ILF as an EO
   d) None of the above
21. If two separate applications maintain the same ILF
   a) Include all the DET’s and RET’s for the entire file when rating the ILF
   b) Include those DET’s and RET’s that the application maintains
   c) Include those DET’s and RET’s that the application references
   d) Both b and c
ESSAY QUESTIONS

1. Please list the primary identification rules for an ILF.

2. What is the primary difference between and ILF and EIF

3. Compare and Contrast the differences between an EI, EO and EQ.

4. Explain the difference between a Notification Message, Error Message and Confirmation Message.

5. List the type of DET’s on an EI.

6. List the type of DET’s on an EO.

7. List all the possible equations or formula’s used in Function Point Counting.
Use this page if necessary for the answers on the previous page.
TRUE AND FALSE QUESTIONS

Objective:
Even though there are no true and false questions on the exam this exercise will encourage the student to recall information related to function point analysis under time pressure. Additionally, the section will provide a review of general concepts related to Function Points.

Expected Result:
The student should obtain a score of 90 percent.

The Exercise:
Like many exercises, the True and False exercise is timed. Timed exercises will improve your ability to work quickly on the actual certification exam. There are over 100 questions and the intent is to make your mind very tired.

The following true and false questions are designed to help you recall definitions and terms. Please circle the T (for true) or F (for false). The exercise is timed. You have 100 minutes to complete this section.

1. Count a single DET for the capability to specify the action to be taken by the external input. (T or F)
2. Edits, algorithms, or calculations are not considered processing logic. (T or F)
3. A data element can be a field that indicates an error occurred during processing or confirm that processing is complete. (T or F)
4. The minimum number of unadjusted function points for an EI that has more than 3 FTR’s is 4. (T or F)
5. An elementary process is the largest unit of activity that is meaningful to the end user in the business. (T or F)
6. Multilanguage’s are considered in the End-User Efficiency GSC question. (T or F)
7. An elementary process is the smallest unit of activity that is meaningful to the end user in the business. (T or F)
8. An EO and EQ share the same complexity matrix table. (T or F)
9. An EI and EQ with the same complexity (Low, Average or High) have the same value. (T or F)
10. An EIF must contain maintained data. (T or F)
11. The Value Adjustment Factor is the same as the total degree of influence. (T or F)
12. An elementary process must be self-contained and leave the business of the application being counted in a consistent state. (T or F)
13. An error message is counted as an external output. (T or F)
14. An error message on an EO would be treated as a DET for the EO. (T or F)
15. A notification message is counted as data element on an external output. (T or F)
16. A notification message is an elementary process and treated as an external output. (T or F).
17. An external output is an elementary process that generates data or control information that is sent outside the application's boundary. (T or F)
18. If the same DET appears multiple times on an EI it should be counted each time it appears on the EI. (T or F)
19. An EI with 3 DET’s and 2 FTR’s would be rated as a Low. (T or F)
20. Control information is data used by the application to ensure compliance with business function requirements specified by the user. (T or F)
21. Resorting or rearranging a set of data is considered processing logic. (T or F)
22. An EQ can contained derived data as long as it is only one field. (T or F)
23. A reference to an ILF or and EIF is not considered processing logic. (T or F)
24. Count a DET for each user recognizable, no recursive field maintained on an ILF by an external input. (T or F)
25. A confirmation message on a transaction (EI, EO and/or EQ) is counted as a DET.
26. An EIF and an EO are valued the same. (T or F)
27. An EQ must reference at least one FTR. (T or F)
28. A drop down list is counted as a unique EQ every time it appears in an application. (T or F).
29. A logical field that is stored physically as multiple fields, but is required by the user as a single piece of information is counted as a single data element. (T or F)
30. An internal logical file read or maintained by a function type is a file type referenced (FTR). (T or F)
31. An EO with 6 DET’s and 3 FTR’s would be rated as a High. (T or F)
32. The value of an EO that has 4 DET's and 5 FTR’s is 6. (T or F)
33. An EI cannot have a derived data. (T or F)
34. The term maintained is the ability to modify data through an elementary process. (T or F).
35. The term user identifiable refers to defined requirements for processes and/or groups of data that are agreed upon, and understood by, both the user(s) and software developer(s). (T or F)
36. The combined unique input and output DET’s are considered when rating an EQ. (T or F)
37. The maximum number of unadjusted function points for an ILF with one RET is 10. (T or F)
38. An EO must either update and ILF or contain derived data. (T or F)
39. An external interface file read a function type references a file type. (T or F)
40. The output side and input sides of an external inquiry contains no derived data, and no internal logical file (ILF) is maintained or updated during processing. (T or F)

41. An external inquiry (EQ) is an elementary process made that results in data retrieval and contains derived information. (T or F)

42. The minimum number of unadjusted function points for an ILF with 7 RET’s is 7. (T or F)

43. An EI can have derived data. (T or F)

44. The development project function point count measures the functions provided to the users with the first installation of the software delivered when the project is complete. (T or F)

45. Derived data is data that requires processing other than direct retrieval and editing of information from internal logical files and/or external interface files. (T or F)

46. A file type referenced (FTR) can be another file besides an internal logical file or external interface file. (T or F)

47. A baseline, application and installed function point counts are really the same thing. (T or F)

48. The formula for the Enhancement Function Point Count is a summation of Added functionality, Functions that have been changed, Conversion Functionality all multiplied by the new Value Adjustment Factor. (T or F)

49. A file type referenced must be an ILF or an EIF. (T or F)

50. The enhancement project function point count measures the modifications to the existing application that add, change, or delete user functions delivered when the project is complete. (T or F)

51. The Value of an EI that references 3 FTR’s and has 4 DET’s is 7 unadjusted function points. (T or F)

52. An internal logical file (ILF) is a user identifiable group of logically related data or control information maintained outside the boundary of the application. (T or F)

53. The Value of an ILF that has one RET and 55 DET’s is 10 adjusted function points. (T or F)

54. An external interface file (EIF) is a user identifiable group of logically related data or control information referenced by the application, but maintained within the boundary of the application. (T or F)

55. The unadjusted and adjusted function point counts are really the same thing. (T or F)

56. An EIF counted for an application must be an ILF in another application. (T or F)

57. The primary difference between an internal logical file and an external interface file is that an EIF is not maintained by the application being counted. (T or F)

58. Control information is data used by the application to ensure compliance with business function requirements specified by the user. (T or F)

59. An ILF does not have to be maintained. (T or F)

60. Function Points are counted from the logical rather than the physical view. (T or F)

61. An ILF must be maintained by the application being counted. (T or F)
62. The term maintained, in the definitions of internal logical file and external interface file refers to the ability to modify data through an elementary process. (T or F)

63. A file can be both an external interface file and an internal logical file for the same application. (T or F)

64. An EIF is an ILF for another application. (T or F)

65. Count a DET for each piece of data in an ILF or EIF that exists because the user requires a relationship with another ILF to be maintained. (T or F)

66. Repeating fields that are identical in format and exist to allow for multiple occurrences of a data value are counted as multiple DET’s. (T or F)

67. A record element type (RET) is a user recognizable subgroup of data elements within an ILF or EIF. (T or F)

68. An ILF could be considered an EIF by several other applications. (T or F)

69. A user view represents a formal description of the user’s business needs in the user’s language. (T or F)

70. A processing logic of an external output must contain at least one mathematical formula or calculation. (T or F)

71. The maximum value of the value adjustment factor is 1.35. (T or F).

72. The minimum value of the value adjustment factor is .67. (T or F)

73. Conversion functionality consists of functions provided only at installation to convert data and/or provide other user-specified conversion requirements, such as special conversion reports. (T or F)

74. Mandatory subgroups are those of which the user must use at least one of the subgroups. (T or F)

75. If applications maintain the same ILF, then both applications would include the ILF in its function point count.

76. If all the GSC’s were evaluated as moderate influence the VAF would be .93.

77. Control data (or information) specifies what, when, or how data is to be processed. (T or F).

78. Application functionality consists of functions used after software installation to satisfy the ongoing business needs of the user. (T or F)

79. Function Points are best counted from a physical rather than a logical view. (T or F)

80. Optional subgroups are those that the user has the option of using one or none of the subgroups during an elementary process that adds or creates an instance of the data. (T or F)

81. The function point counting boundary indicates the border between the project or application being measured and the external applications or user domain. (T or F)

82. Boundaries are used to establish the scope of the product being measured. (T or F)

83. Boundaries act as a “membrane” through which data processed by transactions pass into and out from the application. (T or F)
84. An ILF and EIF share the same complexity matrix table. (T or F).

85. Boundaries are used to establish data ownership required for function point counting (whether data is owned by one application and/or another). (T or F)

86. An ILF can be included in only one applications function point count. (T or F)

87. An external inquiry can alter the behavior of an application. (T or F)

88. The boundary is determined based on the physical point of view. (T or F)

89. An ILF cannot be maintained with an external inquiry. (T or F)

90. The boundary between related applications is based on separate business functions as seen by the user, not on technological concerns. (T or F)

91. Data or control information for an external input must be received from outside the application boundary. (T or F)

92. There are three basic types of Function Point Counts -- Enhancement, Development and Baseline Function Points Counts. (T or F)

93. The answer to this question is False. (T or F)

94. For enhancement projects, the project (enhancement) boundary does not have to conform to the boundaries already established for the application or applications being modified. (T or F)

95. Processing logic is defined as requirements specifically requested by the user to complete an elementary process. (T or F)

96. For both external outputs and external inquiries data or control information is sent external to the application. (T or F)

97. Each GSC can be between .65 and 1.35. (T or F)

98. The primary intent of an EIF is to hold data referenced through one or more elementary processes within the boundary of the application counted. (T or F)

99. The primary intent of an ILF is to hold data maintained through one or more elementary processes of the application being counted. (T or F).

100. Each GSC can have a range of 1 to 5 (T or F).

101. An elementary process must be self-contained and leave the business of the application being counted in a consistent state. (T or F)

102. An elementary process cannot maintain more than one ILF. (T or F)
103. GUI interfaces are considered in the *Online Data Entry* GSC question. (T or F).
TEST TAKING TIPS

Testing Tip 1: After you familiarize yourself with the exam, read the case studies. Do not complete the case study, just scan it.

It is important for you to judge how many case studies there and how long it will take you to complete. You may choose to complete the case study first. If you are afraid of running out of time, then it will be much easier to guess on multiple choice then on the easy section.

Testing Tip 2: Bring “yellow stickies” to the exam.

Use them as tabs to mark the major sections of the counting practice manual. This will help you find information quickly or return to a section. You do not want to waste time fumbling through the manual.

Use stickies to mark places in the exam that you need to return to.

Testing Tip 3: Familiarize yourself with the entire exam. Note the number of sections.

A common mistake made is jumping right into the exam. Many people do not realize the number of case studies or the number of sections. Review the entire exam. Besides, this will give you an opportunity to relax.

Testing Tip 4: Save all the Value Adjustment Factors questions for last.

More than likely you will have to look up the VAF questions. If you save all of the VAF questions until the end, then you will not have to fumble through the book looking for the answers.

Testing Tip 5: When you begin to complete the case study, use a highlighter to mark the five major components.

This will allow you to locate them again without re-reading the case study. Try to bring 5 different colors (one for EI, EO, EQ, ILF and EIF).

Testing Tip 6: Make marks on the exam.

Mark an X on the all the incorrect answers. Take notes and record your thoughts about a question in the margin of the exam. This will make it easier to remember what you were thinking in regards to a particular question.

Testing Tip 7: The best answer may not be the perfect answer.
Remember that the correct answer is judged only in the context of three other choices. The correct answer may be the best of the five, not necessarily the one you would of written. If you find yourself clearly favoring a choice but balking at finally selecting it because, you think, “It is not exactly right,” remember that it does not have to be exactly right, it only has to be the best available.

Testing Tip 8: *Try to work quickly through the easier problems.*

Save any multiple choice questions that you do not know the answer to until you have completed the entire exam.

Testing Tip 9: *When all else fails, eliminate any impossible choices and guess. You will not be penalized for incorrect answers.*

You will surely be able to eliminate some answers choices as definitely incorrect. When you have done so but do not see the possibility of any further progress, make your guess, leave the question and move on to the next question.

Testing Tip 10: *Before beginning work on a section, preview the section.*

Take 10 seconds or so and flip through the pages of that section. The preview will alert you to how long is the section.

Testing Tip 11: *Do not automatically skip a question just because it looks as if the question will require some work.*

Most of the questions on the exam require analysis; and if you skip every question that looks as if it will require work, you will quickly find yourself at the end of the section, having answer no questions at all.

Testing Tip 12: *Show all of your work*

On the case studies make sure you show all of your work. The grader may give you partial credit.

Testing Tip 13: *Do not do additional design and analysis.*

While you are working on the CASE STUDIES *do not do* additional analysis. It is tempting to add fields and redesign the case study. Do the case study as it is written.
Testing Tip 14: *Bring a Calculator*

   Even though most of the arithmetic is not difficult, having a calculator will put your mind at ease and make this an even simpler task.

Testing Tip 15: *Avoid letting your mind wander. If you must pause during the exam, do it as a matter of choice, and only for a predetermined time.*

   Time is both your friend and enemy. Use it wisely, and it will help you score well, use it poorly, and it will bury you. Thirty minutes is a long time to concentrate intensely, and 3 hours is an impossible long time to maintain your mental focus.

   Since you cannot expect unbroken concentration for the entire time period, you must learn to recognize the signs of mental fatigue and have a plan for resting your mind when necessary. If you find your mind wandering, if you find yourself staring out the window, if you find yourself reading the same line over and over without comprehension, then you must pause. Pour yourself a glass of water, rub your neck, and continue. If you find this does not work excuse yourself and stretch your legs – take a short walk to the restroom. Wash your face with some cold water. Do not spend too much time resting from the exam.

Testing Tip 16: *Do not become preoccupied with the time.*

   There are convenient points during the exam to check the time. For example, after you complete a section. Do not constantly watch the clock.

Testing Tip 17: *Bring a watch!*

   Since timing is such an important part of the test, be sure to bring a watch with you. The proctor in charge of administering the exam will announce when work is to begin and with it is time to end. Usually, the proctor will announce the passing time by writing the remaining time on a white board or flip chart.

   With your watch you will know exactly how much time remains. If your watch has a stopwatch function, use it. Not only must you be aware of the passing time, you must be able to use that time to good advantage.

Testing Tip 18: *Arrive at the exam early so you can get your coffee, espresso, water, or whatever and relax.*

Testing Tip 19: *Use the entire time allowed.*

   If you complete the exam early, the go back and review your test sheets. Make sure you have answered all questions, and clearly marked your answers. On the case studies, make sure your handwriting is clear and concise.
Testing Tip 20: Remember all multiple-choice questions are the same weight

If one of the questions requires a lot of reading skip the questions and come back to it later in the exam.

Testing Tip 21: Do the exam in pencil and bring an eraser

Testing Tip 22: Make sure your answers are clear.

You circle the correct response on the answer key make sure that you fill in the circle completely.

Testing Tip 23: Bring a sweater with you to the exam.

It is difficult to predict the climate in a testing room. Frequently the rooms are very cold and it is a good idea to have something warmer to put on.

Testing Tip 24: When you arrive to the exam do not discuss the exam.

Do not discuss the exam or function points immediately prior to taking the exam. You may become confused or worried.

Bring your Certification Prep materials and read though the testing tips section.

Testing Tip 25: Ask the proctor to explain the answer sheet.

Many people have told me the answer sheet is confusing. Prior to the start of the exam, ask to have the answer sheet explained.

Testing Tip 26: Read the fine print

Notice any fine print – especially in the case studies. Be careful of certain kinds of phrases such as:

The user requires the ability to…. 
…provided by a separate application. (an EIF)
…there is an existing EO, which provides a view of the same information. (do not recount EO)
…must be maintained together ( a single EI or two RET)
…Derived data (an EO not an EQ)
…an EO is available online and hard copy and processing logic is different (since the words processing logic is different count as two EO’s)

Be careful not to mix unadjusted and adjusted function points. If the exam asks for adjusted function points make sure you apply the Value Adjustment Factor.
Testing Tip 27: *Understand they are testing you.*

The Certification committee is trying to measure your knowledge of function points. They will ask questions regarding confirmation and error messages. The only way to measure this is to put you on the border.

For example questions like “an EO has 4 FTR’s 5 data elements and..” Notice that depending on what is asked or provided next the EO will be either average or high. Any question, which is on the boarder, should be a big clue to look for the words “error” or “confirmation messages.”

Testing Tip 28: *Do not mix unadjusted and adjusted function points.*

Be careful not to mix unadjusted and adjusted function points. If the exam asks for adjusted function points make sure you apply the Value Adjustment Factor.

Testing Tip 29: *Review the answer sheets*

Before you begin working the case studies, review the answer sheet. Take note of what is being asked. If the questions ask for the identification of transactions and files, do not was time looking for DET’s. If you only have to rate the transaction or file as low, average or high, then concentrate on getting the answer in the right category. You may not have to determine the exact number of DET’s, it may not make a difference.