

Certified Function Point Specialist

IFPUG I40-420

Version Demo

Total Demo Questions: 35

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Topic Break Down

Topic	No. of Questions
Topic 1, Definitions	125
Topic 2, Implementations	107
Topic 3, Case Studies	99
Total	351

QUESTION NO: 1

What is the definition of "consistent state?"

- A. point at which the requirements have been determined and approved by the user
- B. point at which processing has been fully executed; the Functional User Requirement has been satisfied and there is no more to be done
- C. development of all functionality is complete and the testing can begin; the Functional User Requirement have been met
- D. conversion processes have been completed and all historical data converted

ANSWER: B

Explanation:

The correct definition is "point at which processing has been fully executed; the Functional User Requirement has been satisfied and there is no more to be done." In IFPUG Functional Size Measurement, a consistent state is reached when an elementary process has completed all processing needed to satisfy the applicable Functional User Requirement. At that point, the business of the application is left in a valid, usable condition: the process is complete from the Functional User's perspective and does not require additional processing within that same elementary process to finish its intended result.

This concept is central when identifying elementary processes and, consequently, when counting External Inputs, External Outputs, and External Inquiries. The boundary of an elementary process is not determined merely by a technical event, a development milestone, or the timing of data conversion. It is determined by whether the Functional User's requested processing has been fully performed and the application has been left in a stable condition that can support subsequent business processing. This interpretation is consistent with IFPUG's Functional Size Measurement standards and the ISO framework for functional size measurement. See the [IFPUG Standards](#) page and [ISO/IEC 14143-1](#).

QUESTION NO: 3

A Financial application has a file that contains currency exchange rate information. This data is used to convert currency from U.S. dollars to local country currency. This file is considered to be:

- A. Code data
- B. Tabular data
- C. Reference data
- D. None of the above

ANSWER: C

Explanation:

Reference data is correct because currency exchange rates are business-recognizable values that the financial application consults to support a business calculation: converting an amount from U.S. dollars into a local currency. The rates provide context and rules needed by the conversion process, rather than representing an individual business transaction such as a payment, invoice, or account movement.

In IFPUG functional sizing, the important consideration is the data's role from the user's business perspective. Exchange-rate information is meaningful to financial users, is used repeatedly by application processes, and can be maintained independently as rates change over time. It therefore has the characteristics of reference data. During functional-size analysis, the file would subsequently be evaluated under the standard IFPUG data-function rules to establish whether it is maintained within the application boundary or is referenced from outside that boundary; those conditions determine the applicable data-function classification and count.

This distinction helps ensure that the conversion capability is measured based on user-recognizable business information and the application's interaction with it. IFPUG's functional sizing framework and certification resources are available at [IFPUG Functional Size Measurement](#) and [IFPUG Certification](#).

QUESTION NO: 4

Which statement(s) is (are) true for an elementary process?

- A. It is the smallest unit of activity that is meaningful to the user
- B. It is the smallest unit of activity that that leaves the application in a dynamic state
- C. It is the smallest unit of activity that constitutes a complete transaction
- D. Both A and C

ANSWER: D

Explanation:

Both “It is the smallest unit of activity that is meaningful to the user” and “It is the smallest unit of activity that constitutes a complete transaction” is correct. In IFPUG Function Point Analysis, an elementary process is identified from the user’s perspective: it is the smallest unit of activity that delivers meaning to the user. This prevents a single user-recognizable business action from being fragmented into technical steps merely because the implementation contains several screens, services, or database operations.

An elementary process also represents a complete transaction. It is self-contained, begins in response to a user-recognizable event, and completes the requested business activity. The IFPUG Counting Practices Manual further requires that an elementary process leave the business of the application being counted in a consistent state. Thus, the concepts of user meaning and transaction completeness work together when defining the boundary of an elementary process and, subsequently, when identifying an External Input, External Output, or External Inquiry.

IFPUG’s standards and counting-practice materials are available through the [IFPUG Standards](#) page. The broader functional-size-measurement framework is defined in [ISO/IEC 14143-1](#).

QUESTION NO: 5

During the requirements phase for a new application, the user identified 3 logical groups of data. During the construction phase, our database technicians combined the 3 logical groups of data into 1 physical table. How many ILFs would be counted?

- A. 3 ILFs during requirements phase, 3 ILFs during construction phase
- B. 3 ILFs during requirements phase, 1 ILFs during construction phase
- C. 1ILF during requirements phase, 1 ILFs during construction phase
- D. 1 ILF during requirements phase, 0 ILFs during construction phase

ANSWER: A

Explanation:

“3 ILFs during requirements phase, 3 ILFs during construction phase” is correct because IFPUG Function Point Analysis measures the user-recognizable functional requirements of the application, not the physical design selected to implement those requirements. An Internal Logical File is a user-identifiable, logically related group of data or control information that is maintained within the application boundary. Here, the user has identified three distinct logical data groups. Assuming each group is maintained by the application and meets the ILF definition, each is counted as one ILF.

Combining those logical groups into a single physical database table is an implementation decision made during construction. Physical tables, files, schemas, normalization choices, and other technical storage arrangements do not determine the number of ILFs. Therefore, the functional size remains based on the three logical groups identified in the requirements, and the count remains three ILFs after construction. This illustrates the IFPUG principle that function points are technology-independent and are intended to remain stable despite changes in technical implementation. See IFPUG’s overview of its standards at [IFPUG Standards](#) and its description of Function Point Analysis at [IFPUG Functional Size Measurement](#).

QUESTION NO: 6

Which of the following forms of processing logic is mandatory that an EO perform at least one (m*)?

- A. Behavior of the application is altered
- B. Equivalent values are converted
- C. At least one ILF or EIF is referenced
- D. Information is prepared and then presented outside the boundary

ANSWER: A

Explanation:

Behavior of the application is altered is a valid form of qualifying processing logic for an External Output. Under IFPUG counting practices, an EO sends data or control information outside the application boundary and must contain qualifying processing logic rather than merely retrieve and display information. The “at least one” requirement means that the EO must perform one or more qualifying forms of processing logic; altering the application’s behavior is one such form. For example, an output process may cause the application to change a setting, initiate a workflow state, or otherwise modify how the application behaves while producing information outside the boundary. This kind of behavior-changing logic establishes that the process has the substantive processing required for EO classification. The EO is counted as an elementary process based on its complete, user-recognizable processing intent and its qualifying logic. IFPUG’s Function Point Analysis standards define transaction functions and the conditions used to identify and classify them; see the [IFPUG Standards](#) page. The ISO framework governing functional size measurement, including IFPUG-based methods, is available through [ISO/IEC 14143-1](#).

QUESTION NO: 8

The user can request the same data to be displayed in four languages. The data in the different languages are stored in user-maintained tables. How would this display of data be measured?

- A. 1 EQ
- B. 4 EQs
- C. 1 EO
- D. 4 EOs

ANSWER: A

Explanation:

1 EQ is correct because the user is requesting a single inquiry elementary process: retrieve and display the same business information, with the requested language acting as a selection condition for the presentation. The fact that the translated values are held in user-maintained tables does not, by itself, create separate transaction functions. The functional intent remains one user request and one retrieval-and-display process, irrespective of which of the supported language values is selected.

Under IFPUG function point rules, an External Inquiry retrieves data or control information and presents it to the user without maintaining an internal logical file and without containing derived data or calculations that would make the transaction an External Output. Language selection merely determines which stored linguistic version is returned. It does not change the elementary process into separate user-recognizable inquiries when the request, processing, and result are otherwise the same. Therefore, the display is counted once as an EQ; the language-specific records are considered data used by that one inquiry. This application of elementary-process and transaction-function principles is consistent with IFPUG’s standard counting framework, available through the [IFPUG Standards](#) page and the ISO functional-size-measurement overview for [ISO/IEC 14143](#).

QUESTION NO: 9

Which GSC describes the degree to which the application communicates directly with the processor?

- A. Data communications
- B. Distributed data processing
- C. Transaction rate
- D. Online update

ANSWER: A

Explanation:

Data communications is correct because the Data Communications General System Characteristic addresses the extent to which an application communicates directly with the processor through communication facilities. In the traditional IFPUG General System Characteristics assessment, this characteristic captures the application's data-communication requirements and the associated operational complexity, such as the presence and use of communication interfaces or facilities supporting information exchange. The wording in the question—"the degree to which the application communicates directly with the processor"—is the defining concept used for this GSC.

GSCs were historically rated to derive the Value Adjustment Factor used with unadjusted function points. Although current IFPUG functional-size measurement practice emphasizes unadjusted function points as the primary measure, understanding the GSC definitions remains relevant when interpreting legacy counts, maintained baselines, or exam questions covering the traditional Value Adjustment Factor approach. IFPUG maintains information about its Function Point Analysis standards and related materials at [IFPUG Standards](#). Additional information on IFPUG's Function Point Analysis method is available from [IFPUG Functional Size Measurement](#).

QUESTION NO: 10

A database table is maintained by the application being counted. It is an associative entity that has 5 foreign key attributes and no additional attributes. How would this associative entity be counted?

- A. 1 ILF
- B. 1 RET of an ILF
- C. 1 EIF
- D. Not counted

ANSWER: A

Explanation:

1 ILF is correct. An Internal Logical File is a user-identifiable group of logically related data or control information that is maintained within the application boundary. Here, the application being counted maintains the associative entity, so the maintenance criterion is explicitly satisfied. The foreign-key attributes represent the stored association among the related entities. They are data maintained by the application and can constitute the logical data group even though the table contains no non-key attributes.

An associative entity is evaluated as a logical file based on the user view and on responsibility for maintenance, rather than being excluded merely because its fields are foreign keys. The stated five foreign keys identify a maintained association involving the referenced entities; therefore, the associative entity is counted as one ILF. Its five attributes may subsequently be assessed as DETs, when they are user-recognizable and nonrepeated, and the associative entity represents one RET for complexity determination. Those later complexity counts do not change the data-function identification result of one ILF.

The IFPUG standards framework and its Function Point Analysis guidance are available through [IFPUG Standards](#). The ISO framework for functional size measurement, within which IFPUG FPA is recognized, is described at [ISO/IEC 14143-1](#).

QUESTION NO: 11

Which statement applies when counting FTRs for an EO?

- A. Count one FTR for each base functional component that is maintained by the EO
- B. Count one FTR for each unique data function that is accessed by the EO
- C. Count one FTR for each unique base functional component that is accessed by the EO
- D. Count one FTR for each data function that is written to by the EO

ANSWER: B

Explanation:

Count one FTR for each unique data function that is accessed by the EO. Under IFPUG Function Point Analysis rules, a File Type Referenced is a user-recognizable Internal Logical File or External Interface File that a transactional function reads or maintains. For an External Output, identify every distinct logical data function whose data the output accesses while producing the information sent outside the application boundary. Each referenced data function is counted only once, even when the EO accesses it multiple times, accesses multiple records within it, or accesses several data elements from it. The resulting FTR count is then used with the EO's DET count in the IFPUG complexity matrix to determine the appropriate functional complexity and function point contribution. This approach is based on logical user requirements and logical data functions, rather than on physical files, database tables, program modules, or the number of individual read/write operations. IFPUG's standards and certification materials describe the rules governing transactional functions, data functions, and FTR identification; see the [IFPUG Standards](#) page and the [IFPUG Certification](#) resources.

QUESTION NO: 12

Which of the following statements about an External Inquiry are true?

- A. An elementary process that processes data that is sent from outside the boundary
- B. Has a primary intent to alter the behavior of data or control information
- C. Has a primary intent to present information to a user through retrieval of data

ANSWER: C

Explanation:

Has a primary intent to present information to a user through retrieval of data is correct because an External Inquiry is an elementary process whose principal purpose is to provide information to a user by retrieving and presenting data or control information. Under IFPUG functional sizing rules, the classification is driven by the elementary process's primary intent, rather than simply by whether data crosses the application boundary. An External Inquiry supplies requested information without maintaining internal application data and without performing significant processing that creates derived data. The output is therefore a retrieval-oriented response, such as displaying account details, looking up a product's availability, or returning the status of a submitted request. The process may access one or more internal logical files or external interface files to obtain the requested information, but its intent remains presentation through retrieval. This distinction supports consistent classification and counting of transactional functions in an IFPUG function point analysis. IFPUG's standards resources describe the Counting Practices Manual as the authoritative basis for applying these functional-sizing definitions and rules. See [IFPUG Standards](#) and [IFPUG Functional Sizing](#).

QUESTION NO: 13

Which of the following statements is (are) true?

- A. An EIF can only be counted as an EIF for one application
- B. An EIF must be an ILF in another application

- C. An EIF is only counted by the application that uses all of its DETs
- D. All of the above

ANSWER: B

Explanation:

An EIF must be an ILF in another application is correct. Under IFPUG functional size measurement rules, an External Interface File is a user-identifiable group of logically related data or control information that is referenced by the application being measured but maintained outside that application's boundary. The same logical data group therefore has two complementary classifications when viewed from the relevant application boundaries: for the application that maintains it, it is an Internal Logical File; for an application that only references it, it is an External Interface File. "Maintained" means that the elementary processes which add, change, or delete the data are within the maintaining application's boundary. The referencing application may read the data to satisfy its functional requirements, but it does not maintain that logical file. This boundary-based perspective is fundamental to consistent IFPUG counting and prevents the same maintenance responsibility from being attributed to the application that merely accesses the data. IFPUG describes function point analysis as measuring user-recognizable functionality delivered by software, with data functions classified according to the application boundary and maintenance responsibility. See the [IFPUG standards overview](#) and IFPUG's [Functional Sizing](#) information.

QUESTION NO: 14

The Compliance application sends an electronic transaction of summary compliance data to the Laboratory Management application, which then updates an ILF. How would this

(these) transactional function be measured?

- A. 1 EI for the Compliance application, 1 EI for the Laboratory Management application
- B. 1 EO for the Compliance application, 1 EI for the Laboratory Management application
- C. 1 EI for the Compliance application
- D. 1 EIF and 1 EI for the Laboratory Management application

ANSWER: B

Explanation:

"1 EO for the Compliance application, 1 EI for the Laboratory Management application" is correct because the electronic transfer crosses two separate application boundaries and must be identified from each application's perspective. For the Compliance application, the transaction sends summary compliance data outside its boundary. The description identifies the data as summary data, which indicates processing or derivation intended to present information to another application; this is measured as an External Output. The Elementary Process is complete when Compliance produces and sends that output.

For the Laboratory Management application, receiving the transmitted data and updating an Internal Logical File is an External Input. The data enters the Laboratory Management boundary and its processing maintains an ILF, satisfying the defining purpose of an EI. This is a separate Elementary Process because it belongs to the receiving application and is complete when the required internal data maintenance has occurred. Function point analysis consistently applies the boundary of the application being counted, so the same interface event can legitimately be an EO for the sending application and an EI for the receiving application. See the IFPUG standards resources at [IFPUG Standards](#) and IFPUG's overview of [Functional Size Measurement](#).

QUESTION NO: 15

An application's functional size is also referred to as the installed functional size. When is the application functional size updated?

- A. Never, the application functional size is the baseline or installed functional size

- B. Once a year if there were enhancement projects that altered the application functions
- C. Every time completion of an enhancement project alters the application's functions.

ANSWER: C

Explanation:

The application functional size, often called the installed functional size or baseline, represents the functional size of the application as it exists in production at a particular point in time. It must therefore be updated when an enhancement project has been completed and its added, changed, and deleted functions have been implemented. The enhancement functional size is measured using the IFPUG enhancement-counting rules, and the installed size is revised to reflect the resulting application after the enhancement is installed.

This approach preserves an accurate current baseline for the application. The updated size represents the functions that are now available to the user, rather than merely retaining the size from the original installation or updating on an arbitrary calendar schedule. Maintaining the installed functional size after each completed enhancement also supports reliable productivity, quality, maintenance, and portfolio metrics, since those measures need a baseline that corresponds to the application actually in operation.

IFPUG identifies the *Counting Practices Manual* as the authoritative source for function point counting practices, including enhancement counting and application baselines. See the [IFPUG Standards](#) page and the [International Function Point Users Group](#) website.

QUESTION NO: 16

In an enhancement project, a processing logic change is made to the validation of a product record in the Inventory system. Only when a product record is added or changed the validation is performed. Add, Change, Delete, and an implied Inquiry transactions exist for the Inventory system. Which transactions should be included in the enhancement measure?

- A. Add, Change, Delete, and the implied Inquiry
- B. Add, Change, and Delete
- C. Add, and Change
- D. Add only

ANSWER: C

Explanation:

Add, and Change is correct because enhancement measurement includes the functional transactions whose processing logic is modified by the enhancement. The stated change affects validation of a product record, and that validation is executed only when the product is added or changed. Therefore, the enhancement changes the processing logic of both the Add transaction and the Change transaction, so each is included in the enhancement functional size.

Function point analysis evaluates user-recognizable functional requirements and identifies the transactional functions affected by an enhancement. A processing-logic modification is counted for each applicable transaction when that transaction's behavior changes as a result of the new or revised logic. Here, validation is not merely a data-model or technical implementation change; it changes the business processing performed during product addition and product maintenance. The measure must consequently reflect each transaction that invokes the revised validation. This application of enhancement sizing preserves traceability between the changed requirement and the affected user-facing functionality. IFPUG's standards and supporting materials are available through the [IFPUG Standards](#) page and the [International Function Point Users Group](#).

QUESTION NO: 17

What is the primary intent of an EIF?

- A. Hold data maintained through one or more elementary processes of the application being counted
- B. Maintain one or more groups of data and/or to alter the behavior of the system
- C. Hold data referenced through one or more elementary process of the application being counted
- D. Present information to a user through processing logic other than, or in addition to, the retrieval of data or control information

ANSWER: C

Explanation:

The correct answer is *“Hold data referenced through one or more elementary process of the application being counted.”* In IFPUG Function Point Analysis, an External Interface File (EIF) is a user-identifiable group of logically related data or control information that is *referenced* by the application being counted, but is maintained by another application. Its primary intent is therefore to make externally maintained information available for use by an elementary process within the counted application. “Referenced” means that the counted application reads or otherwise uses the data as part of its business processing; it does not perform the maintenance of that logical file. This distinction is central to applying the EIF classification consistently at an application boundary. The wording in the answer expresses the defining intent: the EIF holds data used by one or more elementary processes of the application being measured. IFPUG’s standards materials describe the Function Point Analysis framework and the Counting Practices Manual terminology used to identify data functions such as EIFs. See the [IFPUG Standards](#) page and the [International Function Point Users Group](#) website for official standards information.

QUESTION NO: 19 - (SIMULATION)

Identify the data and/or transactional functions in the following scenario:

In an international company, the user requires the Human Resources (HR) application to provide the following capabilities:

All hourly employees must be paid In United States dollars

When adding or changing employee information (name, social security number, number of dependents, type code, supervisory level, standard hourly rate, collective bargaining unit number, and location name), on the employee screen, the HR application must access the Currency application (CA) to retrieve a conversion rate. After retrieving the conversion rate, the HR application converts the employee’s local standard hourly rate to a U.S. hourly rate using the following calculation:

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When deleting employee information, on the employee screen, the HR application must NOT access the CA application to retrieve a conversion rate.

The HR application must maintain employee information in the HR Employee logical file

From the Names of Possible Functions listed identify the base functional components for the HR application. Select N/A if a Name of Possible Function Type does not apply.

Identify the functions used.

ILF	EIF	EI	EO	EQ	N/A	Names of Possible Functions
☐	☐	☐	☐	☐	☐	HR Employee
☐	☐	☐	☐	☐	☐	CA Conversion Rate
☐	☐	☐	☐	☐	☐	HR Add Employee
☐	☐	☐	☐	☐	☐	HR Change Employee
☐	☐	☐	☐	☐	☐	HR Delete Employee
☐	☐	☐	☐	☐	☐	HR Hourly Rate
☐	☐	☐	☐	☐	☐	HR US Dollars
☐	☐	☐	☐	☐	☐	HR Conversion Rate

ANSWER: See the explanation for the answer

Explanation:

Select the following function types for the HR application:

HR Employee — ILF
CA Conversion Rate — EIF
HR Add Employee — EI
HR Change Employee — EI
HR Delete Employee — EI
HR Hourly Rate — N/A
HR US Dollars — N/A
HR Conversion Rate — N/A

The HR application maintains the HR Employee logical file, so it is an ILF. The conversion-rate data is maintained by the Currency Application and is only referenced by HR; therefore, CA Conversion Rate is an EIF from the HR application boundary.

Add, change, and delete are separate elementary processes that maintain the HR Employee ILF, so each is an EI. The hourly rate, U.S.-dollar amount, and conversion rate are data elements or processing/calculation information used within the add/change transactions; they are not separate user-recognizable data functions or separate elementary transactional functions.

QUESTION NO: 20

Added EO	FTRs	DETs
Job Report	1	15
Changed EI		
Add Job Information (Before)	1	7
Add Job Information (After)	3	8
Deleted EQ		
Bargaining Unit	1	2

For this scenario, calculate the EFP using an unchanged VAF of 1.2 and original application count of 61 FP.

- A. 8.40
- B. 15.60
- C. 69.40
- D. 76.60

ANSWER: B

Explanation:

The correct result is **15.60**. The scenario's enhancement has an unadjusted functional size of 13 function points. For an enhancement, the enhancement function point result is obtained by applying the applicable value adjustment factor to the unadjusted size of the functionality added, changed, or deleted; the pre-existing application size is not added to the

enhancement result. Because the VAF is unchanged at 1.2, the calculation is $13 \times 1.2 = 15.6$ adjusted function points. The stated original application count of 61 FP provides context for the baseline application, but it does not become part of the EFP calculation when the question asks specifically for the size of the enhancement. IFPUG's functional-size measurement method distinguishes the measurement of an enhancement from the total size of the installed application and evaluates the functional impact of the change itself. The terminology and counting framework are maintained by the [International Function Point Users Group](#); its standards and related materials are available through the organization's [standards resources](#).

QUESTION NO: 21

The Job Management application includes the following:

- ☞ Three files of business data: Employee, Job, and Invoice
- ☞ Job Rates file contains data that is stored in order to process the business rules against the business data.
- ☞ The Payment Type file is identified by the developer in response to the technical requirements of the users.

Which of these files are candidates for counting as logical files (ILF or EIF)?

- A. Employee, Job, Invoice, Job Rates, and Payment Type
- B. Employee, Job, Invoice, and Job Rates
- C. Employee, Job, and Invoice
- D. None

ANSWER: B

Explanation:

Employee, Job, Invoice, and Job Rates is correct because each is a candidate logical file under IFPUG function point analysis. Employee, Job, and Invoice are explicitly identified as files of business data, so they represent user-recognizable groups of logically related data that should be evaluated as potential internal logical files or external interface files, depending on the application boundary and which application maintains them.

Job Rates is also a candidate because IFPUG logical files can contain either business data or control information. Data retained to support processing of business rules is control information when it is meaningful to the application's functional operation. The fact that Job Rates is stored and is used to process rules against the business data establishes that it should be assessed as a logical group of data. Its eventual classification as an ILF or EIF depends on whether the Job Management application maintains it or only references data maintained by another application.

The assessment is based on user-recognizable logical data requirements and application-boundary maintenance responsibilities, not merely on physical implementation. This treatment is consistent with the IFPUG functional sizing method, standardized as ISO/IEC 20926; see [ISO/IEC 20926](#) and the [International Function Point Users Group](#).

QUESTION NO: 22

A new development project contains 3 GSC valued at 3 DI, 4 valued at 4 DI, 4 valued at 0

DI and 3 valued at 2 DI. What is the TDI?

- A. .96
- B. .98
- C. 31
- D. .33

ANSWER: C

Explanation:

31 is the Total Degree of Influence (TDI). Under the IFPUG adjustment-factor method, the TDI is calculated by adding the Degree of Influence (DI) ratings assigned to all 14 General System Characteristics (GSCs). The information in the question accounts for all 14 GSCs: three characteristics have a DI of 3, four have a DI of 4, four have a DI of 0, and three have a DI of 2. Therefore, the calculation is $(3 \times 3) + (4 \times 4) + (4 \times 0) + (3 \times 2)$, which equals $9 + 16 + 0 + 6 = 31$. TDI is a whole-number total, not the Value Adjustment Factor itself. If an adjusted function point result were required, the TDI would subsequently be used in the Value Adjustment Factor formula, $VAF = 0.65 + (0.01 \times TDI)$. With a TDI of 31, that later calculation would produce a VAF of 0.96, but the question specifically asks for the TDI. IFPUG describes its functional sizing standards and related materials at [IFPUG Standards](#); the international function-point measurement standard is also cataloged by [ISO/IEC 20926](#).

QUESTION NO: 23

Which is the primary difference between an ILF and an EIF?

- A. An EIF is referenced by the application being counted, while an ILF is not referenced
- B. An EIF is referenced by the application being counted, while an ILF is maintained and not referenced
- C. An ILF is not maintained by the application being counted, while an EIF is
- D. An EIF is not maintained by the application being counted, while an ILF is

ANSWER: D

Explanation:

An EIF is not maintained by the application being counted, while an ILF is is correct because the maintenance responsibility is the defining distinction between these two data function types in IFPUG Function Point Analysis. An Internal Logical File (ILF) is a user-identifiable group of logically related data or control information that is maintained within the boundary of the application being measured. "Maintained" means the application includes elementary processes that add, change, or delete the data in that logical file. The ILF therefore represents data for which the counted application is responsible.

An External Interface File (EIF) is also a user-identifiable group of logically related data or control information, and the application being counted reads or otherwise references it to satisfy a functional requirement. However, the counted application does not maintain that data; another application maintains it. The same logical file may consequently be counted as an ILF by its maintaining application and as an EIF by an application that references it across the application boundary. This ownership-and-maintenance distinction supports consistent identification of data functions and prevents counting the same maintenance responsibility in multiple application boundaries. IFPUG's standards and measurement guidance are available through the [IFPUG Standards](#) page.

QUESTION NO: 24 - (HOTSPOT)

HOTSPOT

A Call Center (CC) application is being enhanced to maintain and display 2 new pieces of information. The CC will add the 2 new DETs to all 5 of the modified transactional functions.

- ☞ The Product Summary Report had 2 FTRs and 12 DETs.
- ☞ Add Literature and Change Literature had 4 FTRs and 19 DETs.
- ☞ The Literature Report (no calculations or derived data) had 4 FTRs and 19 DETs.
- ☞ The Call Log Report (no calculations or derived data) had 1 FTRs and 19 DETs.

What is the complexity of the transactional functions after the enhancement?

Select the complexity for each function:

Function Name	Enter Complexity		
	low	average	high
Product Summary Report	☐	☐	☐
Add Literature	☐	☐	☐
Change Literature	☐	☐	☐
Literature Report	☐	☐	☐
Call Log Report	☐	☐	☐

ANSWER:

Function Name	Enter Complexity		
	low	average	high
Product Summary Report	☐	☒	☐
Add Literature	☐	☐	☒
Change Literature	☐	☐	☒
Literature Report	☐	☐	☒
Call Log Report	☐	☒	☐

Explanation:

Each modified transactional function receives two additional DETs, so the complexity must be evaluated using the post-enhancement DET totals together with the stated FTR counts. The Product Summary Report increases from 12 to 14 DETs while retaining 2 FTRs. As a report that presents derived or calculated information, it is evaluated as an external output. The external-output complexity matrix places 2 FTRs and 14 DETs in the average-complexity range.

Add Literature and Change Literature each increase from 19 to 21 DETs and retain 4 FTRs. These functions maintain application data and are evaluated as external inputs. Under the external-input matrix, a function with at least 3 FTRs and at least 16 DETs has high complexity. Both maintenance functions therefore have high complexity after the enhancement.

The Literature Report has no calculations or derived data, so it is an external inquiry. Its revised values are 4 FTRs and 21 DETs. The external-inquiry matrix classifies an inquiry with at least 4 FTRs and at least 20 DETs as high complexity. The Literature Report is therefore high.

The Call Log Report is also an external inquiry because it has no calculations or derived data. It has 1 FTR and increases to 21 DETs. For an external inquiry, 0 or 1 FTR combined with 20 or more DETs is average complexity. Thus, the marked selections correctly show average for Product Summary Report and Call Log Report, and high for Add Literature, Change Literature, and Literature Report. These classifications follow the IFPUG transaction complexity rules described in the [IFPUG Standards](#) resources.

QUESTION NO: 25 - (HOTSPOT)**HOTSPOT**

Several functions are outlined within the following scenario for the Accounts

Receivable application:

- ☞ From the main menu, the user selects the receive payment option.
- ☞ The receive payment option opens a screen which allows the user to add or change payment information on the Payment Information logical file after performing an inquiry on payments received for the customer. The receive payment option updates the Customer Master logical file to store a current outstanding balance due. If there was no existing outstanding balance, the current balance is added to the Customer Master logical file.
- ☞ From the main menu, the user selects the balance review option.
- ☞ The balance review option accesses the Customer Master logical file and allows the user to create a summary report with customer balance totals.
- ☞ The balance review summary option accesses the Customer Master and Currency Translation logical files. A report is created that contains a comprehensive list of all past balance changes in both company standard currency and customer local currency.

From the Names of Possible Functions listed identify the transactional functions for the Accounts Receivable application. Select N/A if a Name of Possible Function does not apply.

Identify the functions used:

EI	EO	EQ	N/A	Names of Possible Functions
☐	☐	☐	☐	Add Payment
☐	☐	☐	☐	Balance Detail Report
☐	☐	☐	☐	Balance Review Summary Report
☐	☐	☐	☐	Change Payment
☐	☐	☐	☐	Convert Currency
☐	☐	☐	☐	Delete Payment Change
☐	☐	☐	☐	Receive Payment Option
☐	☐	☐	☐	View Currency Translations
☐	☐	☐	☐	View Customer Master
☐	☐	☐	☐	View Payments Received

ANSWER:

EI	EO	EQ	N/A	Names of Possible Functions
☒	☐	☐	☐	Add Payment
☐	☒	☐	☐	Balance Detail Report
☐	☒	☐	☐	Balance Review Summary Report
☒	☐	☐	☐	Change Payment
☐	☐	☐	☒	Convert Currency
☐	☐	☐	☒	Delete Payment Change
☐	☐	☐	☒	Receive Payment Option
☐	☐	☐	☒	View Currency Translations
☐	☐	☐	☒	View Customer Master
☐	☐	☒	☐	View Payments Received

Explanation:

The identified functions are correctly classified by looking at the elementary processes the Accounts Receivable application provides to its user. Add Payment and Change Payment are external inputs because each represents user-initiated processing that maintains internal application data. The receive-payment processing adds or changes payment information and updates the customer's outstanding balance. That combination of maintained data within one user-recognizable process is the essential characteristic of an external input.

View Payments Received is an external inquiry. The scenario explicitly says that the receive-payment process first performs an inquiry on payments received for the customer. This is a retrieval-oriented function: it presents payment information to support the user's next action and does not itself maintain the application's logical files or create a calculated report. Its purpose is therefore to retrieve information in response to the user request.

Balance Detail Report and Balance Review Summary Report are external outputs. The balance-review processing accesses customer balance data and creates a summary report of customer balance totals. The balance-review summary processing accesses both customer and currency-translation data and creates a comprehensive report showing past balance changes in company-standard and local currencies. These reports are generated information delivered beyond the application boundary, with the latter explicitly combining information from multiple logical files and presenting translated currency values. This is output processing rather than a simple retrieval display.

The IFPUG functional-sizing approach classifies transactional functions according to the processing performed across the application boundary and the intent of the delivered result. The payment-maintenance actions, payment inquiry, and report-producing actions therefore constitute the transactional functions selected in the image. The classifications are consistent with the IFPUG methodology described in the [IFPUG Standards](#) resources and the terminology used by the [International Function Point Users Group](#).

QUESTION NO: 26 - (SIMULATION)

PAYROLL APPLICATION - MAINTAIN EMPLOYEE TIME SCREEN

Employees can Add or Update their weekly hours information by entering the project and absence data on the Maintain Employee Time screen. Data is saved to the Employee Payroll ILF.

To begin the Add or Update from the Maintain Employee Time screen, the employee enters his/her employee badge number presses the Retrieve button. Retrieve will fill in the employee name and supervisor badge number from the Employee Master ILF, and will display the current pay period start date and end date from the Payroll Master ILF.

Employees can Delete existing weekly hours information by entering his/her employee badge number and pressing the delete button on the Maintain Employee Time screen. When the employee presses the delete button the current pay period hours will be removed from the Employee Payroll ILF.

PAYROLL APPLICATION - EMPLOYEE PROJECT ACTIVITY REPORT

The Employee Project Activity report is produced for each employee and routed electronically to that employee's email address. Each employee's project task hours for the current pay period are read from the Employee Payroll ILF. The report calculates and displays both daily and weekly total hours for the current pay period.

From the Names of Possible Functions listed identify the transactional functions for the Payroll application. Select N/A if a Name of Possible Functions does not apply.

Identify the functions used.

ANSWER: See the explanation for the answer

Explanation:

Select the following transactional functions for the Payroll application:

Add Employee Weekly Hours — EI. Project and absence information is entered and maintained in the Employee Payroll ILF.

Update Employee Weekly Hours — EI. Existing weekly-hours information is changed in the Employee Payroll ILF.

Delete Employee Weekly Hours — EI. The delete action removes the current pay-period hours from the Employee Payroll ILF.

Retrieve Employee/Pay-Period Information — EQ. The Retrieve action reads and displays employee name and supervisor badge number from Employee Master, plus the pay-period dates from Payroll Master. It does not maintain an ILF and has no derived/calculated output.

Employee Project Activity Report — EO. The report reads Employee Payroll data and calculates daily and weekly totals; the calculated/derived totals make this an External Output rather than an EQ.

Do **not** select the Employee Master ILF, Payroll Master ILF, Employee Payroll ILF, individual displayed fields, or email routing as separate transactional functions. They are data/function attributes or implementation details, not separate transactions.

QUESTION NO: 27

Which category (ies) of data entities is (are) usually identified to satisfy the Functional User

Requirements?

- A. Business data
- B. Reference data
- C. Code data
- D. Both A and B

ANSWER: D

Explanation:

“Both Business data and Reference data” is correct. In IFPUG Function Point Analysis, Functional User Requirements describe what the user needs the software to do, including the information that must be available to support those business needs. Business data represents information that directly supports the organization’s business activities, such as customers, orders, accounts, products, or claims. It is therefore commonly identified when determining the logical data maintained or referenced by the application.

Reference data is also usually identified because it provides meaningful, user-recognized information used to classify, validate, select, interpret, or otherwise support business data and business processes. Examples may include countries, currencies, product categories, status values, or organizational units when these are recognized by the functional user and required by the application's functionality. Identifying both categories ensures that the data perspective of the functional requirements reflects the information the user needs the application to manage and use.

This treatment is consistent with IFPUG's standardized approach to identifying logical data requirements from the functional user viewpoint, rather than from technical implementation details. See the [IFPUG Standards](#) page and the [Certified Function Point Specialist information](#) for the governing Function Point Analysis framework.

QUESTION NO: 28

Identify the potential EI from the following activities:

- A. Authorization for purchase order screen
- B. Generating a report of unauthorized transactions
- C. Sending a transaction to another application that updates the ILF in that other application
- D. Confirmation message that the transaction cannot proceed due to data integrity issues

ANSWER: A

Explanation:

Authorization for purchase order screen is the potential External Input because it represents a user-initiated elementary process crossing the application boundary into the application. In IFPUG functional size measurement, an External Input processes data or control information received from outside the boundary. Its primary intent is to maintain one or more internal logical files and/or alter the behavior of the application. A purchase-order authorization action commonly supplies control information—such as an approval decision, authorization status, approver identity, or authorization date—that causes the application to change how the purchase order is handled. For example, it may permit subsequent processing, release the order for fulfillment, route it to the next workflow stage, or prevent further action until authorization is granted. This business action is therefore a candidate EI even where the detailed implementation must still be reviewed to confirm the elementary-process boundary and the relevant logical files. The identification is based on the functional intent of the authorization activity, rather than on whether it is presented through a particular screen technology. IFPUG's functional-size measurement standards define transaction functions according to boundary crossing and primary intent; see the [IFPUG Standard](#) and the [IFPUG Functional Sizing overview](#).

QUESTION NO: 29

An application provides the users with screen help, field sensitive help, and system help. The help information is maintained within another application. How many EQs are counted?

- A. 1 for each unique screen
- B. 2 for each unique screen
- C. For system help, count 1 for the application, and for screen and field help count 2 for every screen
- D. 3 for the application

ANSWER: D

Explanation:

3 for the application is correct. Under IFPUG functional size measurement guidance, online help is evaluated as an External Inquiry when it provides users with information without maintaining data within the application being counted. In this scenario, the help content is maintained by another application, so the application under measurement retrieves and presents help information rather than maintaining that information itself. The three stated help functions represent distinct

user-recognizable inquiry types: screen help, field-sensitive help, and system help. Therefore, each type is counted as one External Inquiry, producing a total of three EQs for the application. The count is based on the elementary-process distinction represented by the separate purposes of screen-level, field-level, and system-level assistance, rather than on the number of individual screens or fields that may invoke the help. This treatment aligns with IFPUG's standardized approach of measuring user-recognizable functionality delivered across the application boundary. See IFPUG's overview of its functional sizing standards at [IFPUG Standards](#) and its certification information at [CFPS Certification](#).

QUESTION NO: 30

An enhancement project adds one new attribute to each of 10 ILFs. The 10 EIs that maintain these ILFs also include the new attribute. Before the enhancement, the ILFs each had 1 RET and 15 DETs, and the EIs each had 1 FTR and 15 DETs. What is the EFP for the enhancement project?

- A. 100
- B. 110
- C. 130
- D. 140

ANSWER: B

Explanation:

110 is the correct enhancement functional size. Each of the 10 ILFs is changed because a new user-recognizable attribute is added. After the change, each ILF has 1 RET and 16 DETs. Under the IFPUG data-function complexity matrix, an ILF with 1 RET and 1–19 DETs has low complexity and is worth 7 function points. The changed ILFs therefore contribute $10 \times 7 = 70$ function points.

Each of the 10 EIs is also changed, since it now includes the new attribute used to maintain its ILF. Following the enhancement, each EI has 1 FTR and 16 DETs. In the IFPUG transactional-function complexity matrix, an EI with 0–1 FTR and 16 or more DETs has average complexity, valued at 4 function points. The changed EIs therefore contribute $10 \times 4 = 40$ function points.

The enhancement functional size is the sum of the changed data and transactional functions: $70 + 40 = 110$ EFP. This applies the IFPUG enhancement-counting approach, which sizes functionality added or changed by the project using the post-enhancement complexity of the affected functions. See the [IFPUG Function Point Standard](#) and the related [ISO/IEC 14143-1 functional size measurement standard](#).

QUESTION NO: 31

EIs	FTRs	DETs
Add Job Information	1	7
Employee Job Assignment	3	7
Assignment Report Definition	1	5
EOs		
Jobs With Employees	4	5
Employees By Assignment Duration	3	7
Printed Check	1	3
EQs		
Employee List	1	3
Bargaining Unit	1	6

For the scenario above calculate the FP.

- A. 21
- B. 26
- C. 32
- D. 36

ANSWER: C

Explanation:

The correct result is **32** function points. Function point analysis derives an unadjusted functional size by identifying the user-recognizable functionality shown in the scenario, classifying the relevant data functions and transactional functions, determining their complexity from the applicable record-element, data-element, and referenced-file counts, and adding the resulting weights. The total for the functions represented in the diagram is 32. This is an unadjusted functional size: it measures the functionality delivered to the user independently of implementation choices such as programming language, database technology, screens, or internal technical design. The calculation must be based on the functional user requirements and on the boundary indicated by the scenario. IFPUG's counting practice requires that the counted functions be elementary processes or logical data groups recognizable to the user, rather than technical components. The resulting total therefore expresses the amount of functionality in standardized IFPUG function points. The IFPUG standards overview is available from [IFPUG Standards](#), and the international standard describing functional-size measurement concepts is [ISO/IEC 14143-1](#).

QUESTION NO: 32

Which is the correct formula for calculating the AFP after an enhancement project?

- A. AFPA = ADD-DEL
- B. $AFPA = (AFPB + ADD + CHGA) - (CHGB + DEL)$
- C. $AFPA = ADD + CHGA + CFP + DEL$
- D. $AFPA = AFP + CFP$

ANSWER: B

Explanation:

The correct formula is **AFPA = (AFPB + ADD + CHGA) - (CHGB + DEL)**. It calculates the application function point count after the enhancement by beginning with the function point count before the project (AFPB), adding the functionality newly introduced (ADD), and adding the function points of changed functions as they exist after the enhancement (CHGA). It then removes the pre-enhancement function point values for the changed functions (CHGB), because those former versions are replaced, and removes functionality deleted by the project (DEL). This treatment ensures that AFPA represents the functional size of the application's current state after implementation, rather than the size of the enhancement effort alone. In IFPUG enhancement counting, changed functionality has both a before-project and an after-project size because the change replaces an existing function with its revised version. ADD and DEL similarly reflect permanent changes to the application baseline. The resulting AFPA value may be used as the updated baseline for subsequent enhancement measurements and application portfolio reporting. IFPUG's official standards and certification resources are available through [IFPUG Standards](#) and the [IFPUG Certification](#) pages.

QUESTION NO: 33

Which statement(s) is (are) true regarding mandatory processing logic for an EQ?

- A. Data or control information is maintained
- B. Conditions are analyzed to determine which are applicable
- C. At least one ILF or EIF is referenced
- D. Data or control information entering the boundary of the application is accepted

ANSWER: C

Explanation:

At least one ILF or EIF is referenced is correct because an External Query retrieves and presents information from data maintained by, or available to, the application. Under IFPUG functional size measurement rules, an EQ is an elementary process whose primary intent is to present information to a user through retrieval of data or control information. Its processing logic must reference at least one Internal Logical File or External Interface File. That reference establishes the logical data source from which the output information is obtained and distinguishes the transaction as a retrieval-oriented function.

The referenced logical file may be accessed directly or through processing needed to select, format, or organize the information for presentation, provided the transaction remains an EQ under the applicable classification rules. The requirement concerns logical-file reference, not a particular physical database table, screen, API endpoint, or storage technology. Counting is based on the user-recognizable logical data model and the elementary process's functional behavior. IFPUG's standards overview identifies the Counting Practices Manual as the authoritative basis for applying these functional-size measurement definitions and rules. See [IFPUG Standards](#) and [IFPUG](#).

QUESTION NO: 35

The Account data store is maintained by 2 different applications, the Accounts Payable application and the Accounts Receivable application. Each application has its own unique view of the data. There are some common data elements, and some that are unique to each application. How would you count the Account data store?

- A. ILF to Accounts Payable, ILF to Accounts Receivable
- B. ILF to Accounts Payable, EIF to Accounts Receivable
- C. EIF to Accounts Payable, ILF to Accounts Receivable
- D. EIF to Accounts Payable, EIF to Accounts Receivable

ANSWER: A

Explanation:

ILF to Accounts Payable, ILF to Accounts Receivable is correct. Under IFPUG rules, an Internal Logical File is a user-identifiable group of logically related data that is maintained through an elementary process within the application boundary being measured. The Account data store is maintained by both applications, so it meets the maintenance criterion as an ILF for each respective application. Function point analysis is performed from the perspective of a defined application boundary, rather than from the perspective of a physical database or storage object. Consequently, a single physical data store can represent an ILF in more than one application when each application maintains the logical data within its own boundary.

The fact that Accounts Payable and Accounts Receivable share some data elements does not alter this conclusion. Each application has a distinct user view, including data elements unique to that application, and each performs maintenance. The common elements simply reflect data shared by the two logical views; they do not remove either application's maintenance responsibility. Each application's logical Account data group should therefore be identified and counted as an ILF in that application's function point count. This treatment is consistent with the IFPUG method's boundary-based definition of data functions and with the ISO functional-size-measurement framework. See the [IFPUG standards overview](#) and [ISO/IEC 14143-1 functional size measurement](#).