001. A number of independent investigators have developed a team-oriented approach to requirements gathering that can be applied to establish the scope of a project called **C**

A Joint Application Design [JAD]
B Conveyor Line Sorting System [CLSS]
C Facilitated Application Specification Techniques [FAST]
D Software Engineering Environment[SEE]

002. The environment that supports the software project is called **D**

A JAD
B CLSS
C FAST
D SEE

003. Which of the following is not achieved by an automated estimation tools? **D**

A Predicting staffing levels
B Predicting software cost
C Predicting software schedules
D Predicting clients demands

004. Which of the following is not an option to achieve reliable cost and effort estimate? **B**

A Use relatively simple decomposition techniques to generate project cost and effort estimates
B The ability to translate the size estimate into human effort, calendar time, and dollars
C Use one or more empirical models for software cost and effort estimation
D Base estimates on similar projects that have already been completed

005. Which of the following is an important factor that can affect the accuracy and efficacy of estimates? **A**

A Project size
B Planning Process
C Project Complexity
D Degree of structural uncertainty

006. What describes the data and control to be processed? **B**

A Planning process
B Software scope
C External hardware
D Project complexity

007. Which of the following is not project management goal? **D**

A Keeping overall costs within budget
B Delivering the software to the customer at the agreed time
C Maintaining a happy and well-functioning development team
D Avoiding customer complaints

008. The process each manager follows during the life of a project is known as **C**

A Project Management
B Manager life cycle
C Project Management Life Cycle
D Risk management

009. Work Performance Measurement is an output of which process **C**

A Validate Scope
B Define Scope
C Control Scope
D Create WBS

010. Which of these is not one of the constraints of a project? **D**

A Scope
B Resource
C Budget
D Team

011. Which organization is closest to Functional organization? **A**

A Weak Matrix organization
B Balanced Matrix organization
C Strong Matrix
D Projectized organization

012. Which of the following is not a project? **B**

A Running an election campaign for a political candidate.
B Pilot aircraft for a United flight.
C Building a bridge over a river.
D Writing a book on Project Management.

013. If the project is terminated early, the level and extent of completion should be documented. This is done as a part of: **A**

A Validate Scope
B Define Scope
C Control Scope
D Create WBS

014. Validate Scope can be BEST described as the process of **B**

A Validating that the project quality requirements have been met
B Obtaining stakeholder &#39s formal acceptance of the project deliverables

C Controlling changes to the scope of the project
D Validating that all of the project &#39s objectives have been met

015. The project planner examines the statement of scope and extracts all important software functions which is known as **B**

A Association
B Planning process
C Decomposition
D Sub Levels

016. Project Charter is an input to all of the following processes except: **C**

A Collect requirements
B Define Scope
C Create WBS
D Develop Project Management Plan

017. You are engaged in gathering information from stake holders regarding whose interests should be taken into account throughout the project. This is called: **B**

A Identify stakeholders
B Stakeholder analysis
C Expert judgment
D Plan stakeholder management

018. Which of the following is not included in the Stakeholder Management Plan? **A**

A Project lifecycle
B Communications requirements
C Impact of scope changes to stakeholders
D Stakeholder management strategy

019. Most projects will have a _____ number of stakeholders. **C**

A Resistant
B Supportive
C Diverse
D Unknown

020. Plan stakeholder management is fundamentally concerned with all the following except...? **B**

A Developing strategies to effectively engage stakeholders throughout the project
B Development of the stakeholder register
C Development of the stakeholder management plan
D Identifying how the project will affect stakeholders

021. The implementation of which of the following processes decreases the risk of project failure? **D**

A Develop stakeholder engagement
B Plan stakeholder management
C Control stakeholder engagement
D Manage stakeholder engagement

022. The five levels of stakeholder engagement are...? **C**

A Oblivious, opposed, neutral, proactive, driving
B Unaware, opposed, neutral, supportive, driving
C Unaware, resistant, neutral, supportive, leading
D Oblivious, resistant, neutral, supportive, leading

023. At which stage, in a typical project do stakeholders have maximum influence? **D**

A Middle
B Final
C Shareholders have similar influence at all stages.
D Initial

024. Which of the following is not correct about initial phase of a project? **A**

A The cost associated at the beginning of the project is highest.
B Stakeholders have maximum influence during this phase
C The highest uncertainty is at this stage of the project.
D All the stakeholders are involved in the project.

025. Chances for successful completion of a multidisciplinary project are **D**

A Very Low
B BelowExpected
C Above Expected
D High

026. Project Management will also be involved in making choices that require balancing in **B**

A Goals of his Own.
B Goals of the firm.
C Goals of Resources.
D Goals of the Quality.

027. What limits the options of a project team? **A**

A Constraints.
B Assumptions.
C Technologies.
D Deliverables.

028. What are Operational Costs? **C**

A Consists the cost of operations
B Consists the cost of Resources.
C Consists of the costs of operating the system ones it has been installed.
D Consists the cost of the project.

029. Which of the following is not an input to the Control Stakeholder Engagement process? **D**

A Project management plan
B Issue Log
C Project management plan
D Work performance information

030. PMIS stands for **A**

A ProjectManagement Information System
B Project ManagementIntegrated System
C ProjectManagement Inline System
D Project Management Input System

031. A stakeholder is...? **D**

A Anyone who is involved in the project
B Anyone positively or negatively impacted by the project
C Anyone who can influence the direction of the project
D Anyone who can impact/be impacted positively or negatively by the project

032. The three &#39I &#39s &#39 of stakeholders are...? **C**

A Independence, influence and inquiry
B Importance, inquiry and influence
C Interest, influence and importance
D Influence, inquiry and importance

033. Project management is ideally suited for a business environment requiring all of the following except **C**

A Innovation.
B Speed.
C Repeatability.
D Accountability.

034. A common rule of thumb in the world of high-tech product development is that a six-month project delay can result in a loss of product revenue share of ___percent **A**

A 33.
B 45.
C 50.
D 30.

035. Which of these is not part of the "technical dimension" of project management? **B**

A Budgets.
B Problem solving.
C Schedules.
D WBS.

036. An uncertain event or condition that, if it occurs, has a positive or negative effect on project objectives is termed as _____ **C**

A Disaster.
B Hazard.
C Risk.
D Bad Luck.

037. Identify the sub-process of process improvement **B**

A Process introduction.
B Process analysis.
C De-processification.
D Process distribution.

038. Which of the following is choices not one of the stages of the project life cycle? **C**

A Defining.
B Planning.
C Conceptualizing.
D Executing.

039. PRINCE 2 Suggest that PBS be presented as a _____ diagram **D**

A System.
B Structured.
C Decision Tree.
D Hierarchal.

040. What characteristics make a software project different from other Projects? **C**

A Intelligence, Visibility, Complexity.
B Structured, Invisibility, Complexity.
C Invisibility, Complexity, Flexibility.
D Hierarchal, Complexity, Flexibility.

041. Quality planning is the process of developing a quality plan for **C**

A Team
B Customers
C Project
D Project Manager

042. Which of these software characteristics are used to determine the scope of a software project? **C**

A Only Performance.
B Only Context
C Information objectives, function, performance
D Only Design.

043. Effective software project management focuses on the four Ps. What are those four Ps **B**

A People, performance, payment, product.
B People, product, process, project.
C People, product, performance, project.
D People, product, Payment, project.

044. Following are the phases of Project Management Life Cycle. Arrange them in correct order Design, 2. Marketing, 3. Analysis and evaluation,4. Inspection, testing and delivery **A**

A 3-2-1-4
B 1-2-3-4
C 2-3-1-4
D 4-3-2-1

045. Which of the following is not a project managers activity? **D**

A project control
B project management
C project planning
D project design

046. Which of the following is not an effective software project management focus? **B**

A Product
B Popularity
C Process
D People

047. Which of the following is not one ofthe commonly heard comments of project managers? **B**

A Where did this project come from?
B Why this project is so strongly linked tothe strategic plan?
C How can all these projects be first priority?
D Where are we going to get theresources to do this project?

048. Which of the following is not considered to be a characteristic of a project? **B**

A An established objective
B Only for internal use
C A clear beginning and end
D Complex Tasks

049. Which one of the following models is not suitable for accommodating any change? **C**

A Build & Fix Model
B RAD Model
C Waterfall Model
D Prototyping Model

050. Which one of the following is not a phase of Prototyping Model? **D**

A Quick Design
B Coding
C Prototype Refinement
D Engineering Product

051. Which of the following statements regarding Build & Fix Model is wrong? **D**

A No room for structured design
B Code soon becomes unfixable & unchangeable
C Maintenance is practically not possible
D It scales up well to large projects

052. RAD Model has **C**

A 2 Phases
B 3 Phases
C 5 Phases
D 6 Phases

053. Build & Fix Model is suitable for programming exercises of _____ LOC (Line of Code). **A**

A 100-200
B 200-300
C 300-500
D Above 500

054. RAD stands for **B**

A Relative Application Development
B Rapid Application Development
C Rapid Application Document
D Random Application Development

055. Five dimensions that must be managed on a project **B**

A Constraint, Quality, Cost, Schedule, Staff
B Features, Quality, Cost, Schedule, Staff
C Features, priority, Cost, Schedule, Staff
D Features, Quality, Cost, Schedule, customer

056. Devising and maintaining a workable scheme to accomplish the business need is **B**

A Initiating process
B Planning process
C Executing process
D Controlling process

057. The Incremental Model is a result of combination of elements of which two models? **B**

A Build & FIX Model & Waterfall Model
B Linear Model & Prototyping Model
C Waterfall Model & RAD Model
D Linear Model & RAD Model

058. What is the major advantage of using Incremental Model? **D**

A Customer can respond to each increment
B Easier to test and debug
C It is used when there is a need to get a product to the market early
D Easier to test and debug & It is used when there is a need to get a product to the market

059. Which one of the following is an Evolutionary Process Model? **D**

A Win Win Spiral Model
B Incremental Model
C Concurrent Development Model
D Prototyping Model

060. Which is not one of the types of prototype of Prototyping Model? **D**

A Horizontal Prototype
B Vertical Prototype
C Domain Prototype
D Diagonal Prototype

061. What is the major drawback of using RAD Model? **D**

A Highly specialized & skilled developers/designers are required
B Increases reusability of components
C Encourages customer/client feedback
D Increases reusability of components, Highly specialized & skilled developers/designers are required

062. SDLC stands for **A**

A Software Development Life Cycle
B Software Design Life Cycle
C System Development Life Cycle
D SystemDesign Life Cycle

063. Which model can be selected if user is involved in all the phases of SDLC? **B**

A Build & Fix Model
B RAD Model
C Waterfall Model
D Prototyping Model

064. How is Incremental Model different from Spiral Model? **A**

A Progress can be measured for Incremental Model
B Changing requirements can be accommodated in Incremental Model
C Users can see the system early in Incremental Model
D Additional Functionality can be added at a later date

065. Selection of a model is NOT based on **D**

A Requirements
B Development team & Users
C Project type and associated risk
D People

066. If you were to create client/server applications, which model would you go for? **C**

A WINWIN Spiral Model
B Spiral Model
C Concurrent Model
D Incremental Model

067. The spiral model was originally proposed by **B**

A IBM
B Barry Boehm
C Pressman
D Royce

068. The spiral model has two dimensions namely _____ and _____ **C**

A diagonal, angular
B radial, perpendicular
C radial, angular
D diagonal, perpendicular

069. How is WINWIN Spiral Model different from Spiral Model? **B**

A It defines tasks required to define resources, timelines, and other project related information
B It defines a set of negotiation activities at the beginning of each pass around the spiral
C It defines tasks required to assess both technical and management risks
D It defines tasks required to construct, test, install, and provide user support

070. Identify the disadvantage of Spiral Model. **A**

A Doesnt work well for smaller projects
B High amount of risk analysis
C Strong approval and documentation control
D Additional Functionality can be added at a later date

071. Regression testing is a major part of which of the life cycle? **C**

A Waterfall model B V model
C Iterative model D Incremental Model

072. Which of the following are incremental developmental models?1. Prototyping 2. V model 3. Rapid Action Development (RAD) 4. Agile development 5. Rational Unified Process (RUP) **B**

A 1,2,4 B 1,3,4,5
C 1,2,3,4,5 D 1,2,4,5

073. A company is developing an advance version of their current software available in the market, what model approach would they prefer? **C**

A RAD B Iterative Enhancement
C Both RAD & Iterative Enhancement D Spiral

074. Which two models doesnt allow defining requirements early in the cycle? **B**

A Waterfall & RAD B Prototyping & Spiral
C Prototyping & RAD D Waterfall & Spiral

075. Which of the following life cycle model can be chosen if the development team has less experience on similar projects? **A**

A Spiral B Waterfall
C RAD D Iterative Enhancement Model

076. If you were a lead developer of a software company and you are asked to submit a project/product within a stipulated time-frame with no cost barriers, which model would you select? **C**

A Spiral B Waterfall
C RAD D Incremental Model

077. Which two of the following models will not be able to give the desired outcome if users participation is not involved? **D**

A Waterfall & Spiral B RAD & Spiral
C RAD & Waterfall D RAD & Prototyping

078. Which of the following are the basic activities involved in system development phase. i) Preparing the documentation for each one of the programs ii) Receiving the user data for acceptance testing iii) Getting the user sign-off after the acceptance testing iv) Operation and testing of software and hardware **C**

A i, ii and iv only B ii, iii and iv only
C i, ii and iii only D All i, ii, iii and iv

079. During which phase of the SDLC are users trained to use the new system? **B**

A preliminary investigation B systems implementation
C systems development D systems maintenance

080. In V model, why test cases are created before code? **D**

A To gain the confidence in the system B To find defects during dynamic testing
C To meet project deadline D To prevent propagation of defect in next level

081. Which of the following is not type of SDLC models? **B**

A Waterfall model B Capability Maturity model
C Iterative model D Incremental Model

082. In a college,students are asked to develop software. Which model would be preferable? **D**

A Waterfall model B Spiral model
C Iterative model D Code & Fix Model

083. Which of the following model put much more emphasis on testing? **C**

A RAD B Agile model
C V-V model D Spiral

084. Which of the following is not a verification activity? **B**

A Inspection B Testing
C Walk through D technical review

085. The Key Idea of Management artifact is? **A**

A Capture the information necessary to synchronize stakeholders expectations
B Capture the information necessary to balance stakeholders and expectations
C Capture the information necessary for the management
D Implementation purpose

086. What are the artifacts in a Project Life Cycle? **B**

A Management, Planning, Design, Deployment ,Implementation
B Management, Requirements, Design,Implementation, Deployment
C Design, Operational , Implementation, Deployment, Management
D Design, Implementation, Management,Planning,Testing

087. Defect Tracking falls into which artifact? **A**

A Management
B Requirements
C Deployment
D Design

088. The final step of the system analysis phase in the SDLC is to **B**

A gather data
B write system analysis report
C propose changes
D analyze data

089. Which of the following artifact is not associated with the Management Workflow? **C**

A WBS
B Software Development Plan
C Software Change order Data Base
D Business case

090. Status Assessments should not include? **C**

A Review of Resource
B Top Ten Risks
C Marketing Plans
D Product Scope

091. Which of the following does not belong to iterations? **D**

A Inception
B Elaboration
C Construction
D Deployment

092. What is true about the artifacts? **A**

A An Artifact is a physical entity
B An artifact has no temporal location
C All the entities
D Only randomly picked entities

093. The easiest and most commonly used technique for analyzing risks is _____analysis **B**

A Probability
B Scenario
C Payback
D Impact

094. When you have unlimited supply of resource and unlimited time to develop a software which model you pick? **C**

A Spiral
B Waterfall
C Formal Method Model
D Iterative Enhancement Model

095. The management workflow is concerned primarily with three disciples: **A**

A Project, Project Control and organization
B Project Plan, Project Objectives and Scope
C Design, Testing and Implementation
D Design, Implementation, Management

096. What does Requirement Workflow do? **A**

A Analyzing the problem space and evolving the requirement artifacts.
B Modelling the design and evolving the design artifacts.
C Assessing the trends in process and product quality
D Transitioning the work products to users.

097. Which among these are the common notations for deployment diagrams? **A**

A Artifacts and nodes
B Stereotypes
C Components
D Viewpoints

098. Which of these are types of nodes used in deployment diagram? **D**

A Device
B Execution Environment
C Artifact
D Device & Execution Environment

099. Process based estimation is based on problem decomposition which focuses on **C**

A Information Domain Values
B Project Schedules

C Process activities D Process Testing

100. Empirical Estimation models are typically based on **C**

A Expert judgement from the past projects experiences
B Refinement of expected value estimation
C Regression models derived from the historical data
D Trial and error determination

101. FP based estimation is based on problem decomposition based on **A**

A Information Domain Values B Project Schedules
C Process activities D Software Functions

102. Choose the correct option from given below: **C**

A Prototyping Model facilitates reusability of component
B RAD Model Model facilitates reusability of components
C Both RAD & Prototyping Model facilitates reusability of components
D Iterative model facilitates reusability of component

103. Software Project Estimation Techniques can be broadly classified under which of the following headings? **B**

A Automated Process B Decomposition Techniques
C Regression Models D Software Tools

104. Problem based estimation is based on problem decomposition which focuses on **A**

A Information Domain Values B Project Schedules
C Process activities D Process Testing

105. LOC based estimation is based on problem decomposition based on **D**

A Information Domain Values B Project Schedules
C Process activities D Software Functions

106. Statement and branch coverage metrics are part of **B**

A Analysis Model B Testing
C Design Model D Source Code

107. Function Points in software engineering was first proposed by **C**

A Booch B Boehm
C Albrecht D Jacobson

108. Which of the following is not a metric for design model? **D**

A Interface design metrics B Component-level metrics
C Architectural metrics D Complexity metrics

109. In Agile software development techniques focus on the time required to complete each **B**

A Task B Increment
C Scenario D Use case

110. The number of people required for a software project is determined **A**

A After an estimate of the development effort is made
B By the size of the project budget
C From an assessment of technical complexity
D Use case

111. Software Feasibility is based on **C**

A Business and marketing concerns B Scope, constraints, market
C Technology, finance, time, resources D Use case , scope, Finance

112. The project scope is defined as a means of bounding the system **A**

A Functionality & Performance B Costs
C Schedules D Scenarios

113. Consider the basic COCOMO model where E is the effort applied in person-months, D is the development time in chronological months, KLOC is the estimated number of delivered lines of code (in thousands) and a_b, b_b, c_b, d_b have their usual meanings. The basic COCOMO equations are of the form. **A**

A $E = a_b(KLOC)\ exp(b_b)$, $D = c_b(E)\ exp(d_b)$
B $D = a_b(KLOC)\ exp(b_b)$, $E = c_b(D)\ exp(d_b)$
C $E = a_b exp(b_b)$, $D = c_b(KLOC)\ exp(d_b)$
D $E = a_b exp(d_b)$, $D = c_b(KLOC)\ exp(b_b)$

114. In a software project, COCOMO (Constructive Cost Model) is used to estimate **C**

A size, effort and duration based on the cost of the software
B effort and cost based on the duration of the software
C effort and duration based on the size of the software
D size and duration based on the effort of the software

115. **A**

Mt Fc
Fa Fd

SMI = [Mt (Fa + Fc + Fd)]/Mt. Here Mt is the number of modules

A in the current release
B in the current release that have been changed
C from the preceding release that were deleted in the current release
D From the previous history

116. How many Information Domain Values are used for Function Point Computation? **B**

A Three
B Five
C Six
D Four

117. Function Point Computation is given by the formula **B**

A FP = [count total * 0.65] + 0.01 * sum(Fi)
B FP = count total * [0.65 + 0.01 * sum(Fi)]
C FP = count total * [0.65 + 0.01] * sum(Fi)
D FP = [count total * 0.65 + 0.01] * sum(Fi)

118. Architectural Design Metrics are _____ in nature. **A**

A Black Box
B White Box
C Gray Box
D Green Box

119. SMI stands for ... **B**

A Software Mature Indicator
B Software Maturity Index
C Software Mature Index
D Software Maturity Indicator

120. In size oriented metrics, metrics are developed based on the _____ **C**

A number of Functions
B number of user inputs
C number of lines of code
D amount of memory usage

121. COCOMO stands for _____. **B**

A Consumed Cost MOdel
B Constructive Cost MOdel
C Common Cost MOdel
D COmpositive Cost Model

122. The intent of project metrics is **D**

A minimization of development schedule
B for strategic purposes
C assessing project quality on ongoing basis
D minimization of development schedule and assessing project quality on ongoing basis

123. The Function Point (FP) calculated for a software project are often used to obtain an estimate of Lines of Code (LOC) required for that project. Which of the following statements is FALSE in this context? **B**

A On an average, one LOC of C++ provides approximately 1.6 times the functionality of a single LOC of FORTRAN
B The relationship between FP and LOC depends on the programming language used to implement the software.
C LOC requirement for an assembly language implementation will be more for a given FP value, than LOC for implementation in COBOL
D FP and LOC are not related to each other

124. Which of the following are NOT considered when computing function points for a software project? (O1) External inputs and outputs(O2) Programming language to be used for theimplementation(O3) User interactions(O4) External interfaces(O5) Number of programmers in the softwareproject(O6) Files used by the system **D**

A 02,03
B 05,01

C 04,06 D 02,05

125. A company needs to develop digital signal processing software for one of its newest inventions. The software is expected to have 20000 lines of code. The company needs to determine the effort in person-months needed to develop this software using the basic COCOMO model. The multiplicative factor for this model is given as 2.2 for the software development on embedded systems, while the exponentiation factor is given as 1.50. What is the estimated effort in person-months? **A**

A 196.77 B 195.77
C 199.77 D 205.77

126. Which of following are the advantages of using LOC as size oriented metrics **A**

A LOC is easily computed B LOC is a language depended measure
C LOC is a language in depended measure D LOC can be evaluated before the design is completed.

127. A critical path network diagram does NOT: **D**

A Calculate earned value. B Calculate the duration of the whole project.
C Identify the particularly important activities. D Help determine the amount of float.

128. A clear hierarchy of objectives in the project definition would NOT normally contain: **A**

A The Purpose B Success criteria.
C An end result. D Control mechanisms.

129. What form of planning and control focuses on the low volume high variety end of the continuum? **A**

A Project planning and control B Quality planning and control
C Coding and Control D Lean planning and control

130. Which may be estimated either in terms of KLOC (Kilo Line of Code) or by calculating number of function points in the software? **C**

A Time B Cost
C Software Size D Effort

131. What is the most common measure for correctness? **A**

A Defects per KLOC B Errors Per KLOC
C $ per KLOC D Pages of documentation per KLOC

132. Line of code (LOC) of the product comes under which type of measures? **B**

A Indirect Measures B Direct Measures
C Coding D Software Model Index

133. What is the benefit of critical path analysis? **B**

A Indirect Measures B scheduling more efficiently and gettingresourcesto the right place at the right time
C Coding D Software Model Index

134. Which version of COCOMO states that once requirements have been stabilized, the basic software architecture has been established? **A**

A Early design stage model B Post-architecture-stage model
C Application composition model D Later Design Stage Model

135. Which one is not a size measure for software product? **D**

A LOC B Halsteads program length
C Function Count D Cyclomatic Complexity

136. Which of the following uses empirically derived formulas to predict effort as a function of LOC or FP? **D**

A FP-Based Estimation B Process-Based Estimation
C COCOMO D Both FP-Based Estimation and COCOMO

137. Size and Complexity are a part of **B**

A Process Metrics B Product Metrics
C Project Metrics D Task Metrics

138. For the same problem the code size in KLOC in various language can be best estimated at Assembly language: OO languages : icon based graphical language as **D**
A 1:1:2 B 1:20:20
C 1:10:100 D 100:10:1

139. A graphical technique for finding if changes and variation in metrics data are meaningful is known as **C**
A FP analysis B Defect removal Efficiency
C Control Chart D Size point analysis

140. What is related to the overall functionality of the delivered software? **A**
A Function-related metrics B Product-related metrics
C Size-related metrics D Task Related Metrics

141. Which of the following costs is not part of the total effort cost? **C**
A Costs of networking and communications B Costs of providing heating and lighting office space
C Costs of lunch time food D Costs of support staff

142. A _____ is developed using historical cost information that relates some software metric to the project cost. **A**
A Algorithmic cost modelling B Expert judgement
C Estimation by analogy D Parkinsons Law

143. Architectural Design Metrics Focus on **A**
A Architectural Structure B Data structure relationship
C Internal Module Complexity D Internal modules coupling

144. COCOMO-II was developed at **B**
A University of Texas B University of Southern California
C MIT D IIT-Kanpur

145. Which one is not a stage of COCOMO-II? **A**
A Early design stage model B Post-architecture-stage model
C Application composition model D Comprehensive cost estimation model

146. Which model was used during the early stages of software engineering, when prototyping of user interfaces, consideration of software and system interaction, assessment of performance, and evaluation of technology maturity were paramount? **C**
A Early design stage model B Post-architecture-stage model
C Application composition model D Comprehensive cost estimation model

147. Halsteads source code metrics are based on the number of **B**
A Modules in the program B Operands in the program
C Volume elements in the program D Lines in the program