**IT1014 – Software Engineering – Question Bank**

**Objective Questions**

1. Which one of the following is not an Evolutionary Process Model?  
a) Spiral Model  
b) Incremental Model  
c) Concurrent Development Model  
d) Spiral Model  
e) All are Evolutionary Software Models

Answer:e  
Explanation: None.

2. The Incremental Model is a result of combination of elements of which two models?  
a) Build & FIX Model & Waterfall Model  
b) Linear Model & RAD Model  
c) Linear Model & Prototyping Model  
d) Waterfall Model & RAD Model

Answer:c  
Explanation: Each linear sequence produces a deliverable “increment” of the software and particularly when we have to quickly deliver a limited functionality system.

3. What is the major advantage of using Incremental Model?  
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) Both b & c

Answer:d  
Explanation: Incremental Model is generally easier to test and debug than other methods of software development because relatively smaller changes are made during each iteration and is popular particularly when we have to quickly deliver a limited functionality system.However, option “a” can be seen in other models as well like RAD model,hence option “d” answers the question.

4. Which one of the following is not an Evolutionary Process Model?  
a) WINWIN Spiral Model  
b) Incremental Model  
c) Concurrent Development Model  
d) Spiral Model  
e) All are Evolutionary Software Models

Answer:e  
Explanation: None.

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6. What is the major advantage of using Incremental Model?  
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Explanation: Incremental Model is generally easier to test and debug than other methods of software development because relatively smaller changes are made during each iteration and is popular particularly when we have to quickly deliver a limited functionality system.However, option “a” can be seen in other models as well like RAD model,hence option “d” answers the question.

7. Spiral Model has user involvement in all its phases.  
a) True  
b) False

Answer:b  
Explanation: None.

8. How is Incremental Model different from Spiral Model?  
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.

Answer:a  
Explanation: None.

9. If you were to create client/server applications, which model would you go for?  
a) WINWIN Spiral Model  
b) Spiral Model  
c) Concurrent Model  
d) Incremental Model

Answer:c  
Explanation: When applied to client/server applications, the concurrent process model defines activities in two dimensions: a system dimension and a componentdimension.Thus Concurrency is achieved by system and component activities occurring simultaneously and can be modeled using the state-oriented approach

This section on Software Engineering MCQs focuses on “Software Life Cycle Models”.

10.. Build & Fix Model is suitable for programming exercises of \_\_\_\_\_\_\_\_\_\_\_ LOC (Line of Code).  
a) 100-200  
b) 200-400  
c) 400-1000  
d) above 1000

Answer:a  
Explanation: Build & Fix Model is suitable for small projects & programming exercises of 100 or 200 lines.

11. RAD stands for  
a) Relative Application Development  
b) Rapid Application Development  
c) Rapid Application Document

Answer:b  
Explanation: None.

12. Which one of the following models is not suitable for accommodating any change?  
a) Build & Fix Model  
b) Prototyping Model  
c) RAD Model  
d) Waterfall Model

Answer:d  
Explanation: Real projects rarely follow the sequential flow that the Waterfall Model proposes.

13. Which is not one of the types of prototype of Prototyping Model?  
a) Horizontal Prototype  
b) Vertical Prototype  
c) Diagonal Prototype  
d) Domain Prototype

Answer:c  
Explanation: Their is no such thing as Diagonal Prototype whereas other options have their respective definitions.

14. Which one of the following is not a phase of Prototyping Model?  
a) Quick Design  
b) Coding  
c) Prototype Refinement  
d) Engineer Product

Answer:b  
Explanation: A prototyping model generates only a working model of a system.

15. Which of the following statements regarding Build & Fix Model is wrong?  
a) No room for structured design  
b) Code soon becomes unfix-able & unchangeable  
c) Maintenance is practically not possible  
d) It scales up well to large projects

Answer:d  
Explanation: Build & Fix Model is suitable for 100-200 LOC

16. RAD Model has  
a) 2 phases  
b) 3 phase  
c) 5 phases  
d) 6 phases

Answer:c  
Explanation: RAD Model consists of five phases namely:Business modeling,Data modeling,Process modeling,Application generation and Testing & Turnover.

17. What is the major drawback of using RAD Model?  
a) Highly specialized & skilled developers/designers are required.  
b) Increases re-usability of components.  
c) Encourages customer/client feedback.  
d) Both a & c.

Answer:d  
Explanation: The client may create an unrealistic product vision leading a team to over or under-develop functionality.Also, the specialized & skilled developers are not easilyavailable.

18. SDLC stands for  
a) Software Development Life Cycle  
b) System Development Life cycle  
c) Software Design Life Cycle  
d) System Design Life Cycle

Answer:a  
Explanation: None.

19. Which model can be selected if user is involved in all the phases of SDLC?  
a) Waterfall Model  
b) Prototyping Model  
c) RAD Model  
d) both b & c

Answer:c

20. The requirements that result from requirements analysis are typically expressed from one of three perspectives or views.WhaT is that perspective or view ?  
a) Developer  
b) User  
c) Non-Functional  
d) Physical

Answer:d  
Explanation: The perspectives or views have been described as the Operational, Functional, and Physical views.All three are necessary and must be coordinated to fully understand the customers’ needs and objectives.

21. In collaborative requirements gathering the facilitator

A) arranges the meeting place

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif can not be a customer

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif controls the meeting**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif must be an outsider

22. Which of the following is not one of the requirement classifications used in Quality Function Deployment (QFD)?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif exciting

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif expected

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif mandatory**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif normal

23. The work products produced during requirement elicitation will vary depending on the

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif size of the budget

**B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif size of the product being built**

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif software process being used

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif stakeholders needs

24. Which of these is not an element of a requirements model?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Behavioral elements

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Class-based elements

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Data elements**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Scenario-based elements

25. Which of the following is not an objective for building a requirements model?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif define set of software requirements that can be validated

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif describe customer requirements

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif develop an abbreviated solution for the problem**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif establish basis for software design

26. UML activity diagrams are useful in representing which analysis model elements?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Behavioral elements

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Class-based elements

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Flow-based elements

**D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Scenario-based elements**

27. The entity relationship diagram

**A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif depicts relationships between data objects**

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif depicts functions that transform the data flow

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif indicates how data are transformed by the system

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif indicates system reactions to external events

http://highered.mheducation.com/olcweb/styles/shared/spacer.gif  
28. Which of the following items does not appear on a CRC card?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif class collaborators

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif class name

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif class reliability**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif class responsibilities

29. Control flow diagrams are

**A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif needed to model event driven systems.**

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif required for all systems.

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif used in place of data flow diagrams.

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif used to represent system behavior.

30. For purposes of behavior modeling an event occurs whenever

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif a state and process exchange information.

**B) the system an actor exchange information.**

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif two actors exchange information.

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif two objects exchange information.

31. The state transition diagram

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif depicts relationships between data objects

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif depicts functions that transform the data flow

C) indicates how data are transformed by the system

**D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif indicates system reactions to external events**

32.What are the elements of a WebApp interaction model?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif activity diagrams, sequence diagrams, state diagrams, interface prototype

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif activity diagrams, collaboration diagrams, sequence diagrams, state diagrams

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif use-cases, sequence diagrams, state diagrams, interface prototype**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif use-cases, sequence diagrams, state diagrams, sequence diagrams

33. Cohesion is a qualitative indication of the degree to which a module

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif can be written more compactly.

**B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif focuses on just one thing.**

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif is able to complete its function in a timely manner.

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif is connected to other modules and the outside world.

34. Coupling is a qualitative indication of the degree to which a module

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif can be written more compactly.

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif focuses on just one thing.

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif is able to complete its function in a timely manner.

**D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif is connected to other modules and the outside world.**

35. Which of the following is not one of the five design class types

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Business domain classes

**B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Entity classes**

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Process classes

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif User interface classes

36. Which design model elements are used to depict a model of information represented from the user's view?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Architectural design elements

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Component-level design elements

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Data design elements**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Interface design elements

37. Which design is equivalent to the floor plan of a house?

**A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Architectural design**

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Component-level design

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Data design

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Interface design

38. Which design model is equivalent to the detailed drawings of the access points and external utilities for a house?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Architectural design

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Component-level design

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Data design

**D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Interface design**

39. To determine the architectural style or combination of styles that best fits the proposed system, requirements engineering is used to uncover

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif algorithmic complexity

**B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif characteristics and constraints**

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif control and data

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif design patterns

40. Which of the following is not an example of infrastructure components that may need to be integrated into the software architecture?

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Communications components

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Database components

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Interface components**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif Memory management components

41. When the overall flow in a segment of a data flow diagram is largely sequential and follows straight-line paths \_\_\_\_\_\_\_\_\_ is present.

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif low coupling

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif good modularity

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif transaction flow

**D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif transform flow**

42. When a single item that triggers other data flow along one of many paths \_\_\_\_\_\_\_\_ characterizes the information flow in a segment of a data flow diagram is present.

A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif high coupling

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif poor modularity

**C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif transaction flow**

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif transform flow

43. Which model depicts the look and feel of the user interface along with all supporting information?

**A)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif implementation model**

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif user model

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif user's model

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif system perception

44. Which of these framework activities is not normally associated with the user interface design processes?

**A) cost estimation**

B)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif interface construction

C)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif interface validation

D)http://highered.mheducation.com/olcweb/styles/shared/spacer.gif user and task analysis

45. \_\_\_\_\_\_ is the creation of business solutions by combining applications using common middleware.

**a. Enterprise Application Integration**

b. Enterprise Integration Application

c. Integration Application

d. None of the above

46. Middleware is application-independent software that provides services that mediate between \_\_\_\_\_\_\_\_\_.

a. Databases

b. Interfaces

**c. Applications**

d. Technologies

47. API refers to \_\_\_\_\_

a. Application Programming Interconnect

**b. Application Programming Interface**

c. Application Process Interface

d. Application Process Interconnect

48. The \_\_\_\_ integration model is based on integration via access to the data of a software component.

a. Functional

**b. Data**

c. Presentation

d. None of the above

49. \_\_\_\_\_\_ model defines how applications will be integrated by defining the nature of and mechanisms for integration.

a. Presentation

b. Data

c. Functional

**d. Integration**

50. \_\_\_\_\_\_\_ defines the degree of integration.

**a. Coupling**

b. Components

c. Interfaces

d. Wrapper

51. \_\_\_\_\_\_\_\_ integration exposes the internals of the application or database to the integrator in order to produce the required integration.

a. Black box

**b. White box**

c. Data

d. Functional

52. \_\_\_\_\_\_\_\_-based integration requires the specification and implementation of a well-defined interface that describes the actions that an application can perform.

a. Component

**b. Interface**

c. Message

d. Data

53. \_\_\_\_\_ is a type of middleware that is based on the notion of developing distributed applications that integrate at the procedure level.

a. Database access

b. Message oriented

**c. RPC**

d. Distributed

54. \_\_\_\_\_\_\_ is a standard interface originally intended for relational database management systems.

**a. ODBC**

b. DOT

c. MOM

d. None of the above

55. What does ACID stand for with respect to Transaction Processing Monitors.

a. Atomicity, Constant, Isolation, Durability

**b. Architecture, Consistency, Isolation, Durability**

c. Atomicity, Consistency, Integration, Data

d. Atomicity, Consistency, Isolation, Durability

56. \_\_\_\_\_\_\_ is a distributed object technology that is platform independent and enables remote object creation and remote object method invocation.

a. OMG

**b. CORBA**

c. MOM

d. DOT

57. \_\_\_\_\_ components are the basic services on which applications rely to support their business logic.

a. Interface

**b. Platform**

c. External

d. Internal

58. A \_\_\_\_\_\_\_ is a software entity that provides a cohesive set of functional capabilities through a specified interface.

**a. Component**

b. Interface

c. Infrastructure

d. Middleware

59. The objective of a \_\_\_\_\_\_ is usually to determine whether the application meets

its overall goals.

a. Testing

b. Integration testing

**c. Pilot assessment**

d. Functional testing

60. Every company, large or small, has certain internal characteristics such as management style, systems, organizational structure, strategy, staff and \_\_\_\_\_\_\_\_\_\_\_.

a. Top management

**b. Organizational culture**

c. Machines

d. None of the above

61. \_\_\_\_\_ is defined as an entity that encapsulates and hides the underlying complexity of another entity by means of well-defined interfaces.

**a. Wrapper**

b. ODBC

c. CRM

d. ERP

62. SOA stands for \_\_\_\_\_\_\_\_\_

a. Service Oriented Assessment

b. Service Organized Architecture

**c. Service Oriented Architecture**

d. Service Only Architecture

63. \_\_\_\_\_ is the first international standard for IT service management

a. ISO9001

b. ISO14001

c. ISO27001

**d. ISO20000**

64. There are \_\_\_ different ITSM lifecycle stages.

a. 4

**b. 5**

c. 6

d. 3

65. The services in \_\_\_\_\_\_\_ layers will provide basic infrastructure services useful for the majority of existing and new-generation applications.

a. Top

b. Middle

c. Vertical

**d. Horizontal**

66. A \_\_\_\_\_\_\_ is a set of representations (views and models) of an architecture that covers a stakeholder's issues.

a. Interface

b. ITIL

**c. Viewpoint**

d. ISO20000

67. Glue code can be written in the same language as the code it is connecting together, but it is often written in a specialized interpreted [scripting language](http://searchwindevelopment.techtarget.com/definition/scripting-language) for connecting system components called a \_\_\_\_\_\_\_\_\_\_\_.

a. Bind language

**b. Glue language**

c. Sticky language

d. Glove language

68. Brokering and routing layer will need \_\_\_\_\_ information that will define the participating applications, methods, messages, and interfaces, and the sequence of operations involved

a. Transparent

b. All

**c. Metadata**

d. Important

69. Which of the following are not vertical layers of services:

a. Management

**b. Transformation**

c. Naming

d. Rules

70. Black Box Testing sometimes called?

a) Data Flow Testing

b)Loop Testing

**c)Behaviorial Testing**

d)Graph Based Testing

71. which one of the following test is performed by user?

**a)Acceptance Testing**

b)Unit Testing

c)Compatibility Test

d)Stress Test

72.White Box Testing can be stated

a)after SRS creation

b)after design

**c)after programming**

d)after installation

73.The type of software testing in which each module is tested along in an attempt to discover any error in its code, is known as

a)Integration Testing

b)Acceptance Testing

c)Mutation Testing

**d)Unit Testing**

74. \_\_\_\_\_\_\_\_\_\_\_ integration testing begins construction and testing with atomic modules.

a. Top-up

**b. Bottom-up**

c. Up-down

d.Top-down

75.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_refers to the set of activities that ensure that software correctly implements a specific function.

a. Conversion

b. Correction

**c. Validation**

d. Verification

76. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a test case design method that uses the control structure of the procedural design to derive test cases.

a. Black-box testing

b. White-glass testing

c. Red-box testing

**d. White-box testing**

77. In the maintenance phase the product must be tested against previous test cases. This is known as \_\_\_\_\_\_\_\_\_\_ testing.

(a) Unit

(b) Integration

**(c) Regression**

(d) Module

78. White Box techniques are also classified as

a) Design based testing

**b) Structural testing**

c) Error guessing technique

d)module testing

79. Exhaustive testing is

a) always possible

b) practically possible

**c) impractical but possible**

d) impractical and impossible

80. In which phase of the System Development Life Cycle(SDLC), users or developers may discover errors or problems that cause the entire process to start over again?

[A] System analysis

[B] System design

[C] System implementation

**[D] System maintenance**

81. Testing done without planning and Documentation is called

a) Unit testing

b) Regression testing

**c) Adhoc testing**

d) smoke testing

82. Acceptance testing is also known as

a) Grey box testing

b) White box testing

c) Alpha Testing

**d) Beta testing**

83. Which of the following is non-functional testing?

a) Black box testing

**b) Performance testing**

c) Unit testing

d) None of the mentioned

84. Unit testing is done by

a) Users

**b) Developers**

c) Customers

d)Analyst

85. Which of the following manuals is not a user documentation?

a) Beginner’s Guide

b) Installation guide

c) Reference Guide

**d) SRS**

86. Which of the following is black box testing

a) Basic path testing

**b) Boundary value analysis**

c) Code path analysis

d) loop testing

87. Which of the following is not a software testing generic characteristics?

**a) Different testing techniques are appropriate at different points in time**

b) Testing is conducted by the developer of the software or an independent test group

c) Testing and debugging are different activities, but debugging must be accommodated in any testing strategy

d) None of the mentioned

88. Which of the following issues must be addressed if a successful software testing strategy is to be implemented?

a) Use effective formal technical reviews as a filter prior to testing

b) Develop a testing plan that emphasizes “rapid cycle testing.”

c) State testing objectives explicitly

**d) All of the mentioned**

89. Test cases should uncover errors like

a) Nonexistent loop termination

b) Comparison of different data types

c) Incorrect logical operators or precedence

**d) All of the mentioned**

90 . Who identifies, documents, and verifies that corrections have been made to the software?

a) Project manager

b) Project team

**c) SQA group**

d) Analyst

91. Which of the following is not regression test case?

a) A representative sample of tests that will exercise all software functions

b) Additional tests that focus on software functions that are likely to be affected by the change

c) Tests that focus on the software components that have been changed

**d) Low-level components are combined into clusters that perform a specific software sub-function**

92. Which testing is an integration testing approach that is commonly used when “shrink-wrapped” software products are being developed?

a) Regression Testing

b) Integration testing

**c) Smoke testing**

d) Validation testing

93. Which of the following is not a SQA plan for a project?

a) evaluations to be performed

**b) amount of technical work**

c) audits and reviews to be performed

d) documents to be produced by the SQA group

94. Which type of maintenance deals with the problems arise during use of the software ?

**[A] Corrective**

[B] Adaptive

[C] Preventive

[D] predictive

95. Effective software project management focuses on

A) people, performance, payoff, product

B) people, product, performance, process

**C) people, product, process, project**

D) people, process, payoff, product

96. The first step in project planning is to

A) determine the budget.

B) select a team organizational model.

C) determine the project constraints.

**D) establish the objectives and scope.**

97. Which of the following is not considered a stakeholder in the software process?

A) customers

B) end-users

C) project managers

**D) sales people**

98. The best project team organizational model to use when tackling extremely complex problems is the

A) closed paradigm

**B) open paradigm**

C) random paradigm

D) synchronous paradigm

99. One of the best ways to avoid frustration during the software development process is to

A) give team members more control over process and technical decisions.

**B) give team members less control over process and technical decisions.**

C) hide bad news from the project team members until things improve.

D) reward programmers based on their productivity.

100. Which of these software characteristics is not a factor contributing to project coordination difficulties?

A) interoperability

**B) performance**

C) scale

D) uncertainty

101. When can selected common process framework activities be omitted during process decomposition?

A) when the project is extremely small in size

B) any time the software is mission critical

C) rapid prototyping does not require their use

**D) never the activities are invariant**

102. Process indicators enable a software project manager to

A) assess the status of an on-going project

B) track potential risks

C) adjust work flow or tasks

**D) none of the above**

103. Which of the following items are not measured by software project metrics?

A) inputs

**B) markets**

C) outputs

D) results

104. Which of following are advantages of using LOC (lines of code) as a size-oriented metric?

**A) LOC is easily computed.**

B) LOC is a language dependent measure.

C) LOC is a language independent measure.

D) LOC can be computed before a design is completed.

105. Which of the following is not a measure that can be collected from a Web application project?

**A) Customization index**

B) Number of dynamic objects

C) Number of internal page links

D) Number of static web pages

106. Which of the following provide useful measures of software quality?

A) correctness, performance, integrity, usability

B) reliability, maintainability, integrity, sales

C) correctness, maintainability, size, satisfaction

**D) correctness, maintainability, integrity, usability**

107. Why is it important to measure the process of software engineering and software it produces?

A) It is really not necessary unless the project is extremely complex.

B) To determine costs and allow a profit margin to be set.

**C) To determine whether a software group is improving or not.**

D) To make software engineering more like other engineering processes.

108. The objective of software project planning is to

A) convince the customer that a project is feasible.

B) make use of historical project data.

**C) enable a manager to make reasonable estimates of cost and schedule.**

D) determine the probable profit margin prior to bidding on a project.

109. Software feasibility is based on which of the following

A) business and marketing concerns

B) scope, constraints, market

**C) technology, finance, time, resources**

D) technical prowess of the developer

110. LOC-based estimation techniques require problem decomposition based on

A) information domain values

B) project schedule

**C) software functions**

D) process activities

111. FP-based estimation techniques require problem decomposition based on

**A) information domain values**

B) project schedule

C) software functions

D) process activities

112. Empirical estimation models are typically based on

A) expert judgement based on past project experiences

B) refinement of expected value estimation

**C) regression models derived from historical project data**

D) trial and error determination of the parameters and coefficients

113. COCOMO II is an example of a suite of modern empirical estimation models that require sizing information expressed as:

A) function points

B) lines of code

C) object points

**D) any of the above**

114. In agile software development estimation techniques focus on the time required to complete each

**A) increment**

B) scenario

C) task

D) use-case

115. Which of the following is not one of the guiding principles of software project scheduling:

A) compartmentalization

**B) market assessment**

C) time allocation

D) effort validation

116. The 40-20-40 rule suggests that the least of amount of development effort be spent on

A) estimation and planning

B) analysis and design

**C) coding**

D) Testing

117. A task set is a collection of

**A) engineering work tasks, milestones, deliverables**

B) task assignments, cost estimates, metrics

C) milestones, deliverables, metrics

D) responsibilities, milestones, documents

118. The best indicator of progress on a software project is the completion

A) of a defined engineering activity task

B) of a successful budget review meeting on time

**C) and successful review of a defined software work product**

D) and successful acceptance of project prototype by the customer

119. The purpose of earned value analysis is to

A) determine how to compensate developers based on their productivity

**B) provide a quantitative means of assessing software project progress**

C) provide a qualitative means of assessing software project progress

D) set the price point for a software product based on development effort

120. Software risk always involves two characteristics

A) fire fighting and crisis management

B) known and unknown risks

**C) uncertainty and loss**

D) staffing and budget

121. Three categories of risks are

A) business risks, personnel risks, budget risks

**B) project risks, technical risks, business risks**

C) planning risks, technical risks, personnel risks

D) management risks, technical risks, design risks

122. Software risk impact assessment should focus on consequences affecting

A) planning, resources, cost, schedule

B) marketability, cost, personnel

C) business, technology, process

**D) performance, support, cost, schedule**

123. Risk projection attempts to rate each risk in two ways

A) likelihood and cost

B) likelihood and impact

**C) likelihood and consequences**

D) likelihood and exposure

124. Risk tables are sorted by

A) probability and cost

**B) probability and impact**

C) probability and consequences

D) probability and exposure

125. The most important feature of spiral model is

(A) Requirement analysis.

(B) Risk management.

(C) Quality management.

(D) Configuration management.

126. Which phase is not available in software life cycle?

(A) Coding

(B) Testing

(C) Maintenance

**(D) Abstraction**

127. Prototyping aims at

**(A) End user understanding and approval**

(B) Program logic

(C) Planning of dataflow organization

(D) Parallel run

128. Which one of the following is not stage of SDLC?

(A) System analysis

**(B) Problem identification**

(C) System design

(D) Feasibility study

129. If every requirement stated in the Software Requirement Specification (SRS) has only one interpretation, SRS is said to be

(A) Correct.

(B) Unambiguous.

(C) Consistent.

(D) Verifiable

130. Requirements can be refined using

(A) The waterfall model

(B) Prototyping model

(C) The evolutionary model

(D) The spiral model

131. ER diagram is collected with

**(A) Entity relationship**

(B) Data flow

(C) Foreign key

(D) System testing

132. Which one of the following is not related to DFD

(A) Bubble (process)

(B) Arrow (flow)

**(C) Secondary storage**

(D) Data store

133. The ISO quality assurance standard that applies to software engineering is

(A) ISO 9000

(B) ISO 9001

(C) ISO 9002

(D) ISO 9003

134. Which of the following term is best define by the statement “for a component to be composable all external interaction must take place through publicly defined interfaces”?

a) Standardized

b) Independent

**C) Composable**

D) Documented

135. Which of the following is not a type of integration

a) Presentation

b) Functionality

c) Data

**d) Code**

136. Middleware is a type of software that facilitate

a) Communication of request between s/w components.

b) Provides the continue environment to manage request between s/w components

**c) Both a and b**

d) To reduce the communication among the components

137. All the modules of the system are integrated and tested as complete system in the case of

(A) Bottom up testing

(B) Top-down testing

(C) Sandwich testing

(D) Big-Bang testing

138. The main purpose of integration testing is to find

(A) Design errors

(B) Analysis errors

(C) Procedure errors

(D) Interface errors

139. Alpha and Beta Testing are forms of

(A)Acceptance testing

(B)Integration testing

(C)System Testing

(D)Unit testing

140. Which of the following is likely to be most expensive cost of quality?

(A) Appraisal cost

(B) External failure cost

(C) Internal failure cost

(D) Prevention cost

141. A COCOMO model is

(A) Common Cost Estimation Model.

**(B) Constructive Cost Estimation Model.**

(C) Complete Cost Estimation Model.

(D) Comprehensive Cost Estimation Model.

142. In the spiral model ‘risk analysis’ is performed

(A) In the first loop

(B) In the first and second loop

(C) In every loop

(D) Before using spiral model

143. In function point analysis, number of general system characteristics used to rate the system are

(A) 10

(B) 14

(C) 20

(D) 12

144. If P is risk probability, L is loss, then Risk Exposure (RE) is computed as

(A) RE = P/L

(B) RE = P + L

(C) RE = P\*L

(D) RE = 2\* P \*L