1)Choose the correct option in terms of issues related to professional responsibility.

- Confidentiality
- Intellectual property rights
- **Both confidentiality & intellectual property rights**
- Managing Cilent Relationships

2) Efficiency in a software product does not include_____

- **Licensing**

3)As per an IBM report, “31% of the project get cancelled before they are completed,53% overrun theirv cost estimates by an average of 189% and for every 100 projects, and there are 94 restarts”. What is the reason for these statistic?

- **Lack of adequate training in software engineering**

4)The reason for software bugs and failures is due to

- **Both software companies and Developers**

5)Build and fix Model is suitable for programming exercises of_____LOC(line of code).

- ***100-200***

6)RAD stands for

- **Rapid Application Development**

7)Which one of the following models is not suitable for accommodating any change?

- **Waterfail Model**

8)Which is not one of the types of prototype of Prototyping Model?

- **Diagonal prototype**

9)Which one of the following is not a phase of prototyping Model?

- **Coding**

10)Which of the following statements regarding Build and fix Model is wrong?

- **It scales up well to large projects**

11)RAD Model has

- **5 phases**

12)What is the major drawback of sing RAD Model?

- **Increases reusability of components,Highly specialized and skilled developers/designers are required**

13)SDLC stands for

- **Software Development Life Cycle**

14)Which model can be selected if user is involved in all the phases of SDLC?

- RAD Model

15)What are the types of requirements?

- Availiability
- Reilability
- Usability
- **All of the mention**

16)Select the developer-specific requirements?

- **Both portability and maintainability**

17)Which one of the following is not a step of engineering?

- **Design**

18)FAST stands for

- **Facilitated Application Specification Technique**

19)QFD stands for

- **Quality function deployment**

20) A Use-case actor is always a person having a role that different people may play.

- True
- **False**

21)The user system requirements are the parts of which document?

- **SRS**

22)A stakeholder is anyone who will purchase the completed software system nder development.

- True
- **False**

23)Confliciting requirements are common in Requirements Engineering,with each client proposing his or her version is the right one.

- **True**
- False

24)Which is one of the most important stakeholder from the following?

- **Users of the software**

25)Which of the following property does not correspond to a good Software Requirements Specification(SRS)?

- **Ambiguous**

26)The SRS docment is also known as_____

- **Black-box**

27)Which of the following is included in SRS?

- **Design Constraints**

28)The Unified Modeling Language(UML) has become an effective standard for software modeling.How many different notations does it have?

- **Nine**

29)Which model in system modeling depicts the dynamic behavior of the system?

- **Behavioral Model**

30)Which model in system mode depicts the static nature of the system?

- **Structural Model**

31)Which perspective in system modeling shows the system or data architecture?

- **Structual perspective**

32)Activity diagrams are used to model the processing of data.

- T**rue**
- False

33)Model-driven engineering is just a theoretical concept.It cannot be converted into a working/executable code.

- True
- **False**

34)The UML supports event-based modeling using_____diagrams.

- **State chart**

35)Which is the first step in the software development life cycle?

- **Problem/opportunity identification**

36)Which tool is use for structured designing?

- **Structure chart**

37)A step by step instruction used to solve a problem is known as

- **An algorithm**

38)In the Analysis phase the development of the_____occurs which is a clear statement of the goals of the project.

- **Program specification**

39)Actual programming of software code is done during the_____step in the SDLC.

- **Development and Documentation**

40) Who designs are implement database structures.

- **Database administrators**

41)_____is the process of transiating a task into a series of commands that a computer will use to perform that task.

- **Programming**

42)Debugging is:

- **Finding and correcting errors in the program code**

43) In Design phase,which is the primary area of concern?

- Architecture
- Data
- Interface
- **All of the mentioned**

44)The importance of software design can be summarized in a single word which is:

- **Quality**

45)Cohesion is a qualitative indication of the degree to which a modle

- **Focuses on just one thing**

46)Coupling is a qualitative indication of the degree to which a module

- **Is connected to other modules and the outside world**

47)How many diagrams are here in Unified Modelling Language?

- **Nine**

48)What can static analysis is NOT find?

- **Memory leaks**

49)Which plan describes how the skills and experience of the project team members will be developed?

- **Staff Development plan**

50)Alpha and Beta testing are forms of_____

- **Acceptance testing**

51)What are the different interaction diagram notation does UML have?

- A sequence diagram
- A communication diagram
- An interaction overview diagram
- **All of the mentioned**

52)What is a sequence diagram?

- **A diagram that shows interacting individuals along the top of diagram and message passed among them arranged in tempral order down the page**

53)What is the interaction diagram?

- Interaction diagram are the UML notations for dynamic modeling of collaborations
- Interaction diagrams are a central focs of engineering design
- **All the mentioned**
- None of the mentioned

54)What is a lifeline?

- **It is a rectangle containing an identifier with a dashed line extending below the rectangle**

55)What does a message mean?

- **It passes all communications froms one object to another and are represented by message arrows in sequence diagrams**

56)What are the three different types of message arrows?

- **Synchronous,Asynchronous,synchronous with instance creation**

57)Which of these are tr with respect to the message arrows?

- **The dashed arrow is used either to show the return of control from a synchronous message or to create a new entity**.

58)When is the operation executing suspeneded and active?

- An operation is executing when some process is actually running its code
- An operation is suspended when it sends a synchronous message and it is waiting for the message to retrun
- An option is active when it is either executing or suspended
- **All of the mentioned**

59)What are the heuristics which the sequencing diagram follows?

- Put pairs of lifelines that interact heavily
- Position lifelines to make message arrows as short as possible
- Position lifelines to make message arrows go from left to right

- **All of the mentioned**

60)_____is yet another technique that can be sed to reduce customer dissatisfaction at the requirement stage.

- **Prototype**

61)how to get vision of the prodct anf get early feedback form user to ensure that the development tearn understands requirements.

- **Using prototype**

62)A_____is not the real product .It is rather jst a real looking mock-up of what would be eventally delivered and might not do anything useful.

- **Prototype**

64)Transactions are the_____that must be remembered through time.

- **Events**

65)There are_____most important characteristics of an object

- **Three**

66)Data cannot flow from one external entity to other external entity because

- **It is not allowed in DFD**

67)Strong cohesion implies that.

- **All parts of a component have close logical relationship with each other**

68)A tangible entity in the real life is called_____

- **Object**

69)The use case diagram shows that which_____ interact with each use case

- **Actor**

70)_____diagram does not capture control flow information it just shows the flow of the data in a system

- **Data flow**

71)In “Railway ticket reservation system “ the roles sch as inquiry,reservation,ticketing and cancelation are to performed by the….

- **Passenger**

72)Defining the services of an object means:

- **What it does?**

73)All the documents related to the software are also considered as part of the_____

- **Software**

74)in order to determine the role and responsibilities of the identified objects we need to consider which of the following step(s).

a)Who I am?

b)What I Know?

c)Who I Know?

d)What I do?

- **B,c and d**

75)Performance ,Security and maintainability are the types of_____requirements.

- **Non-Functional**

76)To help separate an object’s external behavior from its implementation , the technique used is called_____

- **Abstraction**

75)In Data Flow Diagram(DFD) one data store cannot directly copy the data from another_____

- **Data store**

76)From the following which in/are not the example(s)of illegal data flow Diagram(DFD)

- **There must be an intermediate process which should transform data received from one external and the….**

78)In UML based Object Oritened model of a system the associated relation between two objects is depicted by_____

- **A straight line**

79)I n UML Object Model Notation_____

- **Relationship among classes and sub-classes are expressed**

80)An object model of a system captures the_____structure of a system.

- **Static**

81)Sequence diagrams:

- **Provide a time-bas3ed view**

82)In data flow diagram(DFD),Create,Update, Delete and Roasd operations are normally called

- **CRUD operations**

83)GUL stand for

- **Graphical User Interface**

84)The method of dividing and assigning different poritions of a large system to different groups for construction is called_____

- **Work Breakdown Structure**

86)In object oriented approach_____are the people and organizarions that tasks part in the system under condition.

- **Actors**

86)The focs of sequence diagram is:

- **On objects/classes and message exchanged among them**

88)Normally av system will be be more easy to modify if its modules have

- **Low copling and High cohesion.**

Cs504 Grand Quiz

1) Which one of the following is not the object model principle?

Exposure

2)The _____relationship is kind of a generalization specialization relationship:

Extends

3)The architecture components for product engineering are

Data, hardware, software, people

4)The context diagram is used as the top level abstraction in a _____ developed according to principal of structured analysis

Dataflow diagram

5)In the case of _____ in a system, module boundaries are not well defined

Highly coupled

6)External entity may be

Source of input data and destination of results

7)_____are kind of umbrella activities that are used to smoothly and successfully perform the construction activities

Management activities

8)_____is not the part of peter coad methodology

Select action

9)An object model of a system captures the _____ structure of a system.

Static

10)As per Peter Coad's methodology , which of the following may not be a perfect candidate for being an object?

Password

11)The system model template contains which of the following

Input / Output

12)A _____ is not the real product but a real looking mock-up of what would be eventually delivered

Prototype

13)UML is a language for _____

Modeling and Design

14)In multiprocessing applications, different execution threads may pass information to one another by sending ------- to each other

Asynchronous messages

15)To construct a system model the engineer should consider one of the following restraining factors.

Assumptions and constraints

16)A software requirement document that describes all the _____ provided
by the system along with the constraints under which it must operate.

Services

17)In "point of sale system". the term "payment" represents

Transaction

18)A _____ relationship indicates that one entity is composed of one or more parts which are themselves instances of that or another entity

Whole-part

19)An arrow in data flow diagram (DFD) represents

20)Direction of flow of data

In sequence diagram, the boxes denote**:**

Objects (or classes)

21)The criteria used to access the quality of an architectural design should be based on system

Data and control

22)In Data Flow Diagram (DFD), one data store cannot directly copy the data from another_____.

Data store

23)In UML based Object Oriented Model of a system, the diamond sign is used to depict ---------- relations between two objects/classes.

Composition and Aggregation

24)The context diagram is used as the top level abstraction in a _____ developed according to principal of structured analysis.

Dataflow diagram

25)In Object Oriented design _____ layer contains the data structures and algorithmic design for all attributes and operations for each object.

Responsibility

26)The method of dividing and assigning different portions of a large system to different groups for construction is called_____.

Work Breaking Structure

27)If you try to make software more user-friendly then the _____ may suffer.

Efficiency

28)A _____ is not the real product but just a real looking mock-up of what would be eventually delivered.

Prototype

29)Specialization means:

Creating new subclasses from an existing class

30)Aynchronous massages:

Occurs in multi-threaded applications

31)I n case of _____ approach, data is decomposed according to functionality requirements.

Action-oriented

32)“System should maintain transaction log of every transaction” The above statement is an example of

Functional requirement

33)_____ component of software engineering framework provide automated or semi-automated support in a software development.

Tools

34)There are _____ most important characteristics of an object.

Three

35)Performance, Security and maintainability are the type of _____ requirements.

Non-Functional

36)In multiprocessing applications, different execution threads may pass information to one another by sending ------- to each other.

Asynchronous messages

37)In software engineering paradigm, any engineering approach must be founded on organizational commitment to _____

Quality

38)The process of utilizing our knowledge of computer science in effective production of software system is called ----------.

Software Engineering

39)The architecture components for product engineering are
Data, hardware, software, people
40)To determine the architectural style or combination of styles that best fits the proposed system, requirements engineering is used to uncover
Characteristics and constraints
41)In Data Flow Diagram (DFD), data flow can:
Originate and terminate in an external entity
Sequences of messages can be present in:
(a) Use case diagram
(b) Sequence diagram
(c) Collaboration diagram
b and c
42)The condition that must be met before the use case can be invoked, is called:
Pre-Condition
43)In object oriented design _____ layer contains the details that enable each object to communicates with its collaborators.
Message
44)A DFD is normally leveled (adding more levels of abstraction)as
It is easier to read understand a number of smaller DFDs than one large DFD
45)In Data Flow Diagram, the entity or system, outside the boundary of this system is called
External agent
46)UML stands for _____
Unified Modeling Language
47)In the case of ---------- approach , data is decomposed according to functionality requirements.
Action-oriented
48)In use case diagram, the scope of the system is defined by:
System Boundary
49)In case of ---------- approach , decomposition of a problem revolves around data
Object-Oriented
50)---------- is an extremely powerful technique for dealing with complexity.
Abstraction
51)Normally a System will be more easy to modify if its modules have:
Low coupling and high cohesion
52)In a top-down system analysis a/an _____ is required to develop high level view of the system at fitst.

Analyst

53)Whole part structure is also called _____

Aggregation

54)Defining the services of an object means:

What it does?

55)In -------- relationship, a class shares the structure and behaviour defined in another class

Inheritance

56)The first step in any OOA process model is to

Elicit customer requirements.

57)In sequence diagram, the solid lines depict
Messages being sent from one object to the other

58)Architectural design process involve performing a number of activities which includes system structuring, control modeling and _____

Modular Decomposition

59)The most important and critical stage in the object oriented design is the appropriate classification of_____.

Objects

60)Which of the following is not the model principal?

Exposure

61)OOD results in a design that achieves a number of different levels of_____.

Modularity

62)_____ is a technique that can be used to reduce customer dissatisfaction at requirement stage.

Prototyping

63)While establishing the services for an object, the goal is to keep data and action together for _____ coupling and _____ cohesion.

Lower, Higher

64)In software engineering paradigm, any engineering approach must be founded on organizational commitment to _____

Quality

_____ requirements cause frequent modifications in user 65)interface.

Unstable

66)The use case diagram shows that which _____ interact with each use case.

Actor

67)A useful technique for evaluating the overall complexity of a proposed architecture is to look at the component's_____

Flow dependencies and sharing dependencise

68)Which elements of business processing engineering are the responsibilities of the software engineer?

Business system design

69)In " railway ticket reservation system" the roles such as enquiry. Reservation, ticketing and cancellation are to be performed by the user called:

Passenger

70)In Collaboration diagram, sequence of messaging is show by_____.

Numbering each message in an increasing order of numeric value

71)---------- is concerned with decomposing the system into interacting sub-systems.

System structuring

72)A tangible entity in the real life is called _____.

Object

73)Requirement engineering mainly deals with the _____ of the system

Definition phase

74)A life line represents the object's life during the interaction in a sequence diagram while its notation is depicted by _____.

Dotted Line

75)In sequence diagram, the objects are organized in a_____ line and the events in a _____ time line.

Horizontal, vertical

76)System _____ are built to allow the System Engineer to evaluate the system component in relationship to one another.

Models

77)The modules interacting with each through message passing have _____ between them.

Low coupling

78)Which statement is not according to the software engineering principles? Software engineering is a(a) _____.

79)Unsystematic approach

How can we implement generalization in Object Oriented programming languages?

Inheritance

80)_____ component of software engineering framework provides automated or semi-automated support in a software development.

Tools

81)Strong cohesion implies that:

All parts of a component have a close logical relationship with each other.

82)_____ is not the part of peter coad methodology.

Select actions

83)The focus of sequence diagrams is:

On objects/classes and messages exchange among them

84)In multiprocessing applications where different execution threads may pass information to one another by sending ----------to each other.

Asynchronous messages

85)Which of the following is not supported by a maintainable design?

Higher maintenance cost

86)Return value in Synchronous messages are represented by:

A dotted line with label

87)Which one is not a part of Software Development phase?

Scope

88)There are _____ most important characteristics of an object.

Three

89)Return values in synchronous messages are:

May not use when response is obvious

90)If you try to make software more user-friendly then the --------- may suffer.

Efficiency

91)_____ relationship is concerned with classes not with the class instantiates.

Inheritance

92)Which of the given component of software engineering framework demands Rational and Timely development of a software?

Quality Focus

93)Which of the following is not among the four layers of the object-oriented pyramid?

The abstract layer

94)An attribute that various over time, e.g., price of an item, should be replace by a/an _____ with an effective data and value

Additional Class

95)The criteria used to access the quality of an architectural design should be based on system

Data and control

96)A car is made up of a body, three or four wheels, a steering mechanism, a breaking mechanism, and a power engine”
The above statement is example of:

Whole-part relationship

97)The process of utilizing our knowledge of computer science in effective production of ----------.

System Engineering

98)Software design discusses _____ aspect of software development

How

99)Whole part structure is also called _____

Aggregation

100)_____ of the total cost of the software development is spent on maintenance.

Two third

101)Construction activities are directly related to software _____.

Development

102)Which of the following sentence is true regarding user interface design?

Command-line interfaces are faster for some takes which the user needs to perform.

103 _____is a role that each actor plays in the system under consideration using the object oriented approach.

A participant

102---------- has become a standard notation for object-oriented system modelling:

UML

103_____ point out the elegant conceptual integrity exhibited by layered organization of software

Systems, with the resulting gains in development and maintenance ease

Edsger Dijkstra

104)A use case represents:

The role a user plays when interacting with the system

105)When a class gets physical existence in computer memory, it is called

Static Object

106)An object model encompasses the principle(s) of

All of the given option

107)In Abbot's Textual Analysis technique, different parts of speech are identified within the text of the specification and these parts are modeled using different _____

Components

108)If Dog drives from Mammal, and Mammal derives from Animal, then:

Dog inherits from Animal functions and data

109)In the architecture trade-off analysis method the architectural style should be described using the

All of the given

110)The key object(s) of OOD process should achieve the following:

ALL of the given option

111)Coupling is a measure of _____of a module or component.

Independence

112)_____relationship is concerned with classes not with the class instantiates.

Inheritance

113)_____requirements cause frequent modifications in user interface.

Unstable

114)In object oriented approach, _____are the people and organizations that take part in the system under consideration.

Actors

115)Normally a System will be more easy to modify if its modules have:

Low coupling and High cohesion

116)In use case diagram, the scope of the system is defined by:

System Boundary

117)An object model of a system captures the _____structure of a system.

Static

118)OOD results in a design that achieves a number of different level of_____.

Modularity

_____has become a standard notation for object oriented system 119)mpdeling.

UML

220)In Collaboration diagram, sequence of messaging is show by _____.

Numbering each message in an increasing order of numeric value

221)How can we implement generalization in Object Oriented programming languages?

Inheritance

222)Which of the following is not part of software architecture?

Algorithm deals

223)In Object Oriented design _____ layer contains the data structures and algorithmic design for all attributes and operations for each object.

Responsibility

234)Use case construction is a technique used for:

Requirements structuring

235)An architectural style encompasses which of the following elements?

Constraints, Set of Components and semantic Models

236)Specialization means:

Creating new subclasses from an existing class

237)A process in Data Flow Diagram (DFD) represents

Transformation of data

238)Which elements of business processing are the responsibilities of the software engineer?

Business system design

239)Which of the given component of software engineering framework provides different techniques that Can be used to perform a particular task?

Methods

240)Different message in sequence diagrams includes:

Both simple and Asynchronous

241)In the case of _____, intra component linkages are stronger while inter component linkages are weak.

Low coupling

242)In multiprocessing applications, different execution threads may pass information to one another by sending ------- to each other.

Asynchronous messages

243)Selecting Objects (in a domain) include:

Actor, Participants and Places

244)Which of the following is NOT among the four layers of the object-oriented pyramid?

The abstract layer

245)Many of the problem encountered in software development are attributed to shortcoming in_____

Requirement Gatherings

246)The architecture components for product engineering are

Data, hardware, software, people

247)GUI stands for:

Graphical User Interface

248)_____ component of software engineering framework provide automated or semi-automated support in a software development.

Tools

249)In UML based Object Oriented Model of a system, the diamond sign is used to depict ---------- relations between two objects/classes.

Composition and Aggregation

1. A prototype is not the real product. It is rather just a real looking _____ of what would be eventually delivered and might not do anything useful.
a. **Mock-up**
b. Ad-hoc
c. Design
d. Structure
3. In "Railway ticket reservation system" the roles such as inquiry, reservation, ticketing and cancellation are to be performed by the user called:-
a. **Passenger**
b. System analyst
c. System developer
d. System designer
4. A useful technique for evaluating the overall complexity of a proposedarchitecture is to
look at the component's _____.
a. number and size of components
b. **flow dependencies and sharing dependencies**
c. size and cost
d. function points
5. _____ relationship is concerned with classes not with the class instantiates.
a. Association
b. Inheritance
c. Aggregation
d. Composition
7. The data on which the program operates is also considered as part of the _____.
a. Important Data
b. Software
c. Logical Data
d. Utility Software
9. In sequence diagram, the objects are organized in a _____ line and the events in a
_____ time line.
a. Horizontal, straight
b. Vertical, straight
c. Horizontal, vertical
d. Vertical, horizontal
10. Consider the following piece of code:
public class Square extends Shape {
// some code
}

The above code is an example of:
a. Part-Whole relationship
b. **Generalization/Specialization**
c. Data Sharing
d. Data encapsulation
11. Requirement engineering mainly deals with the _____ of the system
a. Vision Phase
b. **Definition Phase**
c. Development Phase
d. Maintenance Phase
12. A _____ relationship indicates that one entity is composed of one or more parts which
are themselves instances of that or another entity.
a. Inheritance
b**. Whole-part**
c. Generalization
d. Specialization
13. In UML Object Model Notation _____
a. C++ language-specific programs are constructed
b. mathematical problems are visualised
c. **relationships among classes and sub-classes are expressed**
d. Graphs and tables are used to explain Software Engineering principles
14. In the case of _____, intra component linkages are stronger while inter component
linkages are weak.
a. high cohesion
b**. low coupling**
c. low cohesion
d. high coupling
15. Transactions are the _____ that must be remembered through time.
a. Events
b. Actions
c. Triggers
d. Methods
16. The modules interacting with each other through message passing have _____between them.
a. low cohesion
b. high cohesion
c**. low coupling**
d. high coupling

17. In UML based Object Oriented model of a system, the inheritance relation between two classes is shown by a _____ sign towards the super-class side on the association line between the two.
a. A filled diamond
b. An unfilled diamond
c. A half arrowhead
d. **An arrowhead**
18. Which statement is not according to the software engineering principles? Software engineering is a(n) _____.
a. Balancing act
b. Disciplined approach
c**. Unsystematic approach**
d. Quantifiable approach
19. A _____ is not the real product but just a real looking mock-up of what would be eventually delivered.
a. Software
b. Program
c**. Prototype**
d. Test Case
20. The best way to conduct a requirements validation review is to
a. examine the system model for errors
b. have the customer look over the requirements
c. send them to the design team and see if they have any concerns
d**. use a checklist of questions to examine each requirement**
21. More powerful hardware resulted into the development of _____ powerful and _____ software.
a. less, complex
b**. more, complex**
c. more, simple
d. less, simple
22. _____ pointed out the elegant conceptual integrity exhibited by layered organization of software systems, with the resulting gains in development and maintenance ease.
a. David Parnas
b. Shaw and Garlan
c. Barry Boehm
d**. EdsgerDijkstra**
23. The architecture components for product engineering are
a**. data, hardware, software, people**
b. data, documentation, hardware, software

c. data, hardware, software, procedures
d. documentation, hardware, people, procedures
24. In Object oriented design, combining the services offered by an object with the attributes they work on, results in:
a) Lower coupling and stronger cohesion
b) Lower cohesion and stronger coupling
c) Increased likelihood of reuse
d) Decreases the modularity of the system
a. a only
b. band c
c**. a and c**
d. b and d
25. Architectural design process involves performing a number of activities which includes
system structuring, control modeling and _____.
a. System Analysis
b. **Modular Decomposition**
c. Testing
d. Graphical User Interface
26. In use case diagram, the scope of the system is defined by:
a. Actor
b. Entity
c. **System Boundary**
d. "Extends" relationship
27. Specialization means
a. Calling the same method with object of child object
b. Hiding the data
c. **Creating new subclasses from an existing class**
d. Abstraction
28. Which of the following sentence is true regarding user interface design?
a. GUI interfaces are good for all tasks which a user needs to perform at an interface.
b. The higher the response time, the better is the interface
c. **The simpler the interface, the efficient is the system**
d. Command-line interfaces are faster for some tasks which the user needs to perform
29. In the architecture trade-off analysis method the architectural style should be described
using the
a. data Flow view and process view

b. data Flow view and module view
c. module view and process view
d. **data Flow view, module view and process view**
30. In Data Flow Diagram, the entity or system, outside the boundary of this system is called
a. Process
b. Data Flow
c. **External Agent**
d. Data Store
31. A cohesive Class is one which emphasizes on _____ unit of functionality
a. Single
b. **Multiple**
c. Static
d. Both Single and Multiple
32. The goal of _____ is to translate the customer's desire for a set of defined capabilities into a working product.
a. Electrical Engineering
b**. Product Engineering**
c. Hardware Engineering
d. Mechanical Engineering
33. In Object Oriented Design. _____ layer contains the details that enable each object to
communicate with its collaborators
a. Subsystem
b. Responsibility
c**. Message**
d. Object
34. A DFD is normally leveled (adding more levels of abstraction) as
a. it is a good idea in design
b. it is recommended by many experts
c. it is easy to do it
d. **it is easier to read and understand a number of smaller DFDs than one large DFD**
35. As per Peter Coad's methodology, which of the following may NOT be a perfect candidate for being an object?
a. Zone
b. Recipient
c. Garage
d. **Password**

36. Which of the given component of software engineering framework provides different techniques that can be used to perform a particular task?
a. Processes
b. Tools
c.**Method**
d. Quality Focus
37. To determine the architectural style or combination of styles that best fits the Proposed
system requirements engineering is used to uncover
a. algorithmic complexity
b. **characteristics and constraints**
c. control and data
d. design patterns
38. In _____relationship, a class shares the structure and behavior defined in another
class.
a. Aggregation
b. Composition
c. **Inheritance**
d. Uses
39. Prototyping is used when there is regarding requirements.
a. **Uncertainty**
b. Confirmation
c. Conflict
d. Consensus
40. The process of utilizing our knowledge of computer science in effective production of software systems is called
a. Chemical Engineering
b. Electrical Engineering
c. Computer Engineering
d. Software Engineering
41. In Abbot's Textual Analysis technique, different parts of speech are identified within the text of the specification and these parts are modeled using different__
a. Event
b. Process
c. Operations
d. **Components**
42. To help separate an object's external behavior from its implementation, the technique
used is called_____

a. Generalization
b. Association
c. Composition
d. **Abstraction**
43. A Process in Data Flow Diagram (DFD) represents
a. Flow of data
b. Transformation of data
c. Storage of data
d. An external agent
44. In data flow diagram (DFD). Create, Update, Delete and Read operations are normally called:
a. **CRUD operations**
b. DURC operations
c. RUDC operations
d. CDUR operation
45. Collaboration diagram can show_____
a) Binary messages
b) Asynchronous messages
c) Synchronous messages
a. a only
b. b only
c. c only
d. both b and c
46. Data cannot flow from one external entity to other external entity because
a. It will get corrupted
b**. It is not allowed in DFD**
c. An external entity has no mechanism to read or write
d. Both are outside the context of the system
48. Which of the following is not part of software architecture?
a. Databases
b. data design
c. program structure
d. algorithm details
49. Selecting objects in a domain) include:
a. **Actors. Participants and Places**
b. Only Participants
c. Only Actors
d. Only Actors and Places
50. Defining the services of an object means:
a**. What it does?**

b. What it knows?
c. Who knows it?
d. Whom it knows?
51. In sequence diagram, the solid lines depict:
a. Objects (or classes)
b. **Messages being sent from one object to the other**
c. Life-time of an object
d. state of the object
52. Sequence diagrams:
a. Provide the static behavior
b. Provide Data Flow
c. **Provide a time-based**
d. Provide parallel data flow
53. _____requirements cause frequent modifications in user interface
a. Functional
b. Non-functional
c. **Unstable**
d. User
54. , security and maintainability are the types of _____ requirements.
a. **Non-functional**
b. Domain
c. Functional
d. Business
55. A change becomes _____ because of close presence of data and functions
a. Accessible
b. Global
c. Private
d. **Localized**
56. System _____ are built to allow the system engineer to evaluate the system components in relationship to one another.
a. Requirements
b. Documents
c. **Models**
d. Test cases
58. The focus of sequence diagrams is:
a**. On objects/classes and messages exchanged among them**
b. On static Model of system
c. On object constraints
d. On the flow of Control
59. In Data Flow Diagram (DFD), data flow can:

a. Only originate from an external entity
b. Only terminate in an external entity
c. **Originate and terminate in an external entity**
d. Either originate or terminate in an externalentity but not both
60. In _____ the analyst determines all the sources of requirements and where do these requirements consume
a. Data Flow Analysis
b**. Source and Sink Analysis**
c. Down Parsing
d. Up Parsing
61. In a top-down system analysis, a/an _____ required to develop high level view of the system at first.
a. Analyst
b. Designer
c. Tester
d. Developer
62. The Use case diagram shows that which _____ interact with each use case.
a. Use case
b. **Actor**
c. Component
d. Relation
63. The context diagram is used as the top level abstraction in a _____ developed according to principles of structured analysis.
a. **Dataflow diagram**
b. Activity Diagram
c. State Transition Diagram
d. Use Case Diagram
64. Different messages in sequence diagrams includes:
a. Simple
b. Asynchronous
c. Notify
d. **Both Simple and Asynchronous**
65. A software requirement document describes all the _____ provided by the system along with the constraints under which it must operate.
a. Conditions
b. **Services**
c. Events
d. Processes
66. In case of a _____ message, the called routine that handles the message iscompleted before the caller resumes execution.

a) Synchronous
b) Asynchronous
c) Bidirectional
a. **a only**
b. b only
c. c only
d. both b and c
67. In object oriented design, _____ layer contains the data structures and algorithmic design for all attributes and operations for each object.
a. Subsystem
b. Class and Object
c. Message
d. **Responsibility**
68. Asynchronous messages:
a. are implemented as operation call
b. These block caller before response
c**. occurs in multi-threaded applications**
d. are shown by dotted line
69. In UML based object oriented model of a system, a composition relation between two objects is shown by a _____ sign on the whole side of a relation line.
a. An unfilled diamond
b. A filled diamond
c. A half diamond
d. A dot
70. In UML based Object Oriented Model of a system, the diamond sign is used to depict_____ relations between two objects/classes.
a. Aggregation and Association
b. Inheritance and Association
c. **Composition and Aggregation**
d. Composition, Aggregation and Association
71. A “register” in “Point of sale system” is an example of:
a. Actor
b. Participant
c. **Tangible thing**
d. Transaction
72. A use case represents
a. A class, it attributes and operation
b. An operation’s inter faces and signature
c. **The role a user plays when interaction with the system**
d. The system’s functionality for a particular purpose

73. In the case of _____ approach, data is decomposed according to functionality requirements.
a. Object-oriented
b. **Action-oriented**
c. Event-oriented
d. Process-oriented
74. To construct a system model the engineer should consider one of the following restraining factors?
a. **Assumptions and constraints**
b. Budget and expenses
c. Data object and operation
d. Schedule and milestone
75. When two components of a system are using the same global data area, they are related as
a. Data coupling
b. Content coupling
c. Common coupling
d. External coupling
76. _____ Structure represents the internal organization of the various data and control
items.
a. Data
b. Value
c. Information
d. Conceptual
77. The method of dividing and assigning different portions of a large system to different
groups for construction is called _____
a**. Work Breakdown Structure**
b. Working Boundary Structure
c. Work Basic Structure
d. Work Breakdown System
78. "A car is made up of a body, three or four wheels, a steering mechanism. a breaking mechanism and a power-engine"
The above statement is example of :
a. Whole-Part relationship
b. Inheritance
c. Specialization
d. Generalization

79. In software engineering paradigm, any engineering approach must be founded on organizational commitment to _____.
a. Cost
b. Scheduling
c. **Quality**
d. Performance
80. _____ is a technique that can be used to reduce customer dissatisfaction at requirement stage.
a. Analysis
b. Negotiation
c. **Prototyping**
d. GUI
82. In UML based Object Oriented model of a system, the association relation between two objects is depicted by _____.
a**. A straight line**
b. A filled diamond sign on the whole side of the line
c. An unfilled diamond sign on the whole side of the line
d. Any arrowhead sign on one side of the line
83. _____are kind of umbrella activities that are used to smoothly and successfully perform the construction activities
a. Designee activities
b. **Management activities**
c. Testing activities
d. Maintenance activities
84. Software Design discusses _____ aspect of software development
a. What
b. How
c. Who
d. When
85. Include and extend relationship is used in UML notation of a/an _____.
a. Activity Diagram
b. Data Flow Diagram
c. Entity Relationship Diagram
d. Use Case Model
86. External Entity may be
a. source of input data only
b. source of input data or destination of results
c. destination of results only
d. repository of data
87. An object model of a system captures the_____ structure of a system.

a**. Static**
b. dynamic
c. iterative
d. Hierarchical
88. The criteria used to assess the quality of an architectural design should be based on system
a. accessibility and reliability
b. data and control
c. functionality
d. implementation details
89. In case of _____ approach, decomposition of a problem revolves around data
a. Object-oriented
b. Action-oriented
c. Event-oriented
d. Process-oriented
90. How can we implement generalization in Object Oriented programming languages?
a. Polymorphism
b. Encapsulation
c. Abstraction
d. Inheritance
91. Which of the following is NOT among one of the four layers of the Object Oriented (OO) design pyramid
a. The subsystem layer
b. The class and object layer
c. The Abstract layer
d. The message layer
92. _____ is a technique in which we construct a model of an entity based upon its essential characteristics and ignore the inessential details.
a. Inheritance
b. Polymorphism
c. Aggregation
d. Abstraction
93. The project manager would need _____ document to monitor and track the progress
of the project.
a. Design
b. Project
c. **Requirement**
d. Planning
94. In the case of action-oriented approach data is decomposed according to:

a. Object requirements
b. **Functionality requirements**
c. Corresponding domain model
d. Compatibility with object interface
95. An architectural style encompasses which of the following elements?
a. Constraints, Set of Components and Semantic
b. Set of Components and Semantic Models
c. Semantic Models and Constraints
d. Set of Components and Constraints
96. In order to determine the role and responsibilities of the identified objects, we need to
consider which of the following step(s):
a) Who I am?
b) What I know?
c) Who I know?
d) What I do?
a. a only
b. a and b
c. b, cand d
d. cand d
97. In sequence diagram, the boxes denote:
a. Objects (or classes)
b. Messages, sent from one object to other
c. Life-time of Objects
d. Relationships
98. _____ is a system component that provides services to other components but would not normally be considered as a separate system.
a. Method
b. Module
c. Message
d. Relationship
99. A tangible entity in the real life is called _____.
a. Functions
b**. Object**
c. Class
d. Sub-Class
100. Sequence of messages can be present in:
a) Use case diagram
b) Sequence diagram
c) Collaboration diagram

a. a only
b. b only
c. c only
d. b and c
101. The system model template contains which of the following elements
a. Input
b. Output
c. System Out
d**. Input/Output**
102. Identify the TRUE statement:
a. Normally Object Oriented design is more maintainable than functional oriented.
b. Software with Functional oriented design does not fulfill non functional requirements.
c. Object Oriented design cannot implement "Separation of concerns" strategy
d. Function Oriented design does not lead to an efficient product
103. An external entity that interacts with a system is called a(n):
a. Use case
b. Actor
c. Stakeholder
d. Association
104. By levelling a DFD (adding more levels of abstraction) we mean
a. Splitting it into different levels
b. Make its structure uniform
c. Expanding a process into one with more sub-processes giving more detail
d. Summarizing a DFD to specify only the essentials
105. Software Engineering is the combination of tools, techniques and _____.
a. Testing
b. Processes
c. Maintenance
d. Design
106. _____ is concerned with decomposing a system into interacting subsystems.
a. System Structuring
b. Control Modeling
c.Modular decomposition
d. Work Breakdown Structure
107. There are _____most important characteristics of an object.
a. Six
b. Four
c. Two
d. Three

108. “System should maintain transaction log of every transaction”
The above statement is an example of
a**. Functional requirement**
b. Non-functional requirement
c. Pseudo requirement
d. Both Non-functional and Pseudo requirements
109. In object oriented approach, _____ are the people and organizations that take part in the system under consideration.
a. Actors
b. Places
c. Participants
d. Tangible things
110. The modules that interact with each other through message passing have _____.
a. Low coupling
b. High coupling
c. Low cohesion
d. High cohesion
111. Identifying Whole-part structures (Aggregations) means what are my _____
a. **Components**
b. Attributes
c. Methods
d. Messages
112. In “point of sale system “ the term payment represents
a. Actor
b. Participant
c. Transaction
d. Container
113. Return values in synchronous messages are:
a. Compulsory
b. May not used when response is obvious
c. Not used at all
d. Represented by solid lines
114. GUI stand for
a. Generic user interface
b. Graphic user interface
c. Generic user interaction
d. Graphical user interaction
115. Which of the following is not the object model principle?

a. Abstraction
b. Encapsulation
c. Hierarchy or inheritance
d. Exposure
117. The _____ provides the software engineer with a viewof the system as a whole.
a. Process Model
b. Architectural Model
c. Business model
d. Requirements Model
119. An arrow in Data Flow Diagram (DFD) represents
a. Direction of flow of data
b. Processing of data
c. External agent
d. Internal agent
120. The _____ relationship is kind of a generalization specialization relationship.
a. Bit-Byte
b. Uses
c. Binary
d. Extends
121. In the case of _____ in a system, module boundaries are not well defined.
a. low cohesion
b. high coupling
c. low coupling
d. high cohesion
122. _____ Component of software engineering framework provides automated or semi-automated support in a software development.
a. Processes
b. Methods
c. Quality Focus
d**. Tools**
123. In Data Flow Diagram (DFD), one data store cannot directly copy the data from another _____.
a. Agent
b. Process
c. Data store
d. Flow
124. All the documents related to the software are alsoconsidered as partof the

_____.
a. Physical Document
b. Logical Document
c. Relational Database
d. Software
125. Which elements of business processing engineering are the responsibilities of the software engineer?
a. business area analysis
b. business system design
c. product planning
d. information strategy planning
126. A class will be cohesive if:
a. Class does not implement Complex interfaces
b. Class does not have complex methods
c. If most of the methods do not use most of the data members most of the time
d**. If most of the methods use most of the data members most of the time**
127. A context diagram is used
a. As the first step in developing a detailed DFD of a system
b. In systems analysis of very complex systems
c. As an aid to system design
d. As an aid to programmers
128. _____ is an extremely powerful technique for dealing with complexity.
a. Aggregation
b. Abstraction
c. Inheritance
d. Association
129. In multiprocessing applications, different execution threads may pass information to one another by sending _____ to each other.
a. Interrupt calls
b. Synchronous messages
c. Asynchronous messages
d. System calls
130. Normally a system is more easy to modify if its modules have
a. High coupling and high cohesion
b. High coupling and low cohesion
c. Low coupling and high cohesion
d. Low coupling and Low cohesion
131. UML is a language for
a. High-level Programming
b. Low-level Programming

c**. Modeling and Design**
d. Creating diagrams only
132. _____ is not the part of Peter Coad methodology
a. Select actors
b. Select participants
c. Select places
d. Select actions
133. Which of the following is the external quality of software product?
a. Correctness
b. Concision
c. cohesion
d. Low coupling
134. While establishing the services for an object, the goal is to keep data and action together for _____ coupling and _____ cohesion
a. Lower, Higher
b. Higher, Lower
c. Lower, Lower
d. Higher, Higher
135. A necessary supplement to transform or transaction mapping needed to create a complete architectural design is
a**. entity relationship diagrams**
b. the data dictionary
c. processing narratives for each module
d. test cases for each module
136. Construction activities are directly related to software _____.
a. Management
b. Planning
c. Quality Assurance
d. Development
138. At which stage of software development loop, results are delivered?
a. Problem definition
b. Solution integration
c. Technical development
d. Status quo
139. _____ Requirements are often called product features.
a. Functional
b. Non-functional
c. Developer
d. User
140. Strong cohesion implies that

a. All parts of component have a class logical relationship with each other
b. All part of component do not have a close logical relationship with each other
c. Component is dynamic in nature
d. Component is static in nature
141. _____ Diagram does not capture control flow information; it just shows the flow of the data in a system.
a. Sequence
b**. Data Flow**
c. Activity
d. Class
142. A life line represents the object's life during the interaction in a sequence diagram while its notation is depicted by _____
a. Solid Lines
b. Dotted Lines
c. Full Arrow
d. Curved Lines
143. An attribute that varies over time, e.g. price of an item, should be replaced by a/an _____ with an effective date and value
a. Additional Class
b. Additional Method/Function
c. Interface
d. Structure
144. Which of the given component of software engineering framework demands rational and Timely development of a software?
a. Tools
b. Methods
c. Quality Focus
d. Processes
145. A context diagram
a. describes detailed design of a system
b. is a DFD which gives an overview of the system
c**. is a detailed description of a system**
d. is not used in drawing a detailed DFD
146. Which one is not a part of Software Development phase?
a. Construction
b. Scope
c. Project Vision
d. Definition
147. Software architecture must address _____requirement of a software system

a. Functional
b. Non Functional
c. User interface Requirements
d. Both Functional and Non Functional
148. If Cat is derived from Mammal Class, and Mammal is derived from Animal Class, then:
a. Cat will inherit Animal's functions and data
b. Cat will not inherit Animal's functions and data
c. Cat will not be able to access any class
d. Cat is allowed to access only the Mammal's Class
149. Which of the following is not supported by a maintainable design?
a. Change
b. debugging
c. Adding new features
d. Higher maintenance cost
150. The condition that must be met before the use case can be invoked, is called:
a. Pre-Condition
b. Post-Condition
c. Pre-Assertion
d. Post-Assertion

CS504 GRAND QUIZ
MCS FAMILY GROUP TEAM
BY: ARSAL SHANI & AINA MALIK

1) Modules with high cohesion and low coupling can be treated and analysed as
   i. White boxes
   ii. black boxes
   iii. grey boxes
   iv. none of these
2) While establishing the services for an object, the following fundamental questions should be asked:
   i) Why does the system need this object anyway?
   ii) What useful questions can it answer?
   iii) What useful action can it perform?
   iv) All of the given options.
3) ---------- is a role that each actor plays in the system under consideration.
   i) An act
   ii) A participant
   iii) A function
   iv) None of the given
4) Any Engineering approach must be founded on organizational commitment to ----------.
   i. Cost
   ii. Scheduling
   iii. Quality
   iv. Performance
5) Return values in synchronous massages are:
   i) Compulsory
   ii) May not used when response is obvious
   iii) Not used at all
   iv) Represented by solid lines
6) According to Caper Jhones analysis of project activities, coding only has ------- affect part in system development.
   i. 13-14%
   ii. 36-40%
   iii. 50-60%
   iv. 70-80%
7) Normally a system is more easy to modify if its modules have
   i. High coupling and high cohesion
   ii. High coupling and low cohesion
   iii. Low coupling and high cohesion
   iv. Low coupling and Low cohesion
8) In multi-threaded or multiprocessing applications where different execution threads may pass information to one another by sending ----------to each other.

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i. Interrupt calls
ii. Synchronous messages
iii. Asynchronous messages
iv. System Calls

9) Which of the following is not among the four layers of the object-oriented pyramid?
i. The subsystem layers
ii. The class and object layer
iii. The abstract layer
iv. The message layers

10) System models include:
i. User business processes
ii. User activities for conducting the business process
iii. Processes that need to be automated
iv. All of the given options

11) In the architecture trade-off analysis method the architectural style should be described using the
i. Data flow view
ii. Module view
iii. Process view
iv. All of the given

12) ---------- is concerned with decomposing the system into interacting sub-systems.
a) System structuring
b) Control Modelling
c) Molecular Decomposition
d) None of the given

13) A use case represents:
i. A class, its attributes and operations
ii. An operation's interface and signature
iii. The role a user plays when interacting with the system
iv. The system's functionality for a particular purpose

14) External entity may be:
i. Source of input data only
ii. Source of input data and destination of results
iii. Destination of results
iv. Repository of data

15) The process of utilizing our knowledge of computer science in effective production of ----------.
i. Chemical Engineering
ii. Electrical Engineering
iii. Computer Engineering
iv. System Engineering

16) Coupling is a measure of ---------- of a component.
i. Independence
ii. Dependence
iii. Aggregation
iv. Composition

17) ---------- has become a standard notation for object-oriented system modelling:

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i. UML
ii. C++
iii. OCL(Object Constraint Language)
iv. None of the given option

18) An arrow in data flow diagram represents:
i. Direction of flow of data
ii. Processing of data
iii. External agent
iv. Internal Agent

19) ---------- diagrams does not capture control flow information, it just shows the flow of data in a system.
i. Sequence
ii. Data Flow
iii. Activity
iv. Class

20) In ---------- the analyst determines the source of requirements and where do these requirements consume:
a) Data flow analysis
b) Source and sink analysis
c) Down parsing
d) Up parsing

21) Data cannot flow from one external entity to other external entity because:
a) It will get corrupted
b) It is not allowed in DFD
c) An external entity has no mechanism to read or write
d) Both are outside the context of the system

22) In the functional design, the structure of the system resolves around:
a) Objects
b) Properties
c) Functions
d) All of the given options

23) ---------- is one of the techniques to document domain knowledge
a) State transition diagram
b) Feasibility matrix
c) System matrix
d) None of the given options

24) In case of ---------- approach , decomposition of a problem revolves around data.
a) Object-Oriented
b) Action-Oriented
c) Event-Oriented
d) Process-Oriented

25) The ---------- relationship is a kind of a generalization specialization relationship:
a) Bit-Byte
b) Uses
c) Binary
d) Extends

26) Which statement is not true about system software?

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a) Change request has direct impact on software
b) Passes through a constant process of evolution
c) Change requests have direct impact in the form of defects
d) None of the given

27) Strong cohesion implies that:
a) All parts of a component have a close logical relationship with each other
b) All parts of a component don't have a close relationship with each other
c) Component is dynamic in nature
d) Component is static in nature

28) The intent of Object-Oriented Analysis(OOA) is to define:
a) All classes
b) Relationships among classes
c) Behaviour of classes
d) All of the given options

29) Requirement engineering focuses on ---------- aspect of the software development process.
a) Both what and how
b) What
c) How
d) Why and how

30) ---------- relationship is concerned with classes, not with class instantiates.
a) Association
b) Inheritance
c) Aggregation
d) Composition

31) Which of the following statements are true in context of the object model deviation through the Coad methodology?
a) A place is also a contains
b) Every container needs to be a place
c) Same person may play different times in the system.
i. A only
ii. A and b
iii. A and c
iv. All of the given

32) The goal of --------- is to translate the customer's desire for a set of defined capabilities into a working product.
i. Electrical engineering
ii. Product engineering
iii. Hardware engineering
iv. Mechanical engineering

33) In case of a ------- message, the called routine that handles the message is completed before the caller resumes execution.
a) Synchronous
b) Asynchronous
c) Bidirectional
i. A only
ii. B only

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iii. C only
iv. All of the given

34) In multiprocessing applications, different execution threads may pass information to one another by sending ------- to each other.
i. Interrupt calls
ii. Synchronous messages
iii. Asynchronous messages
iv. System calls

35) A car is made up of a body, three or four wheels, a steering mechanism, a breaking mechanism, and a power engine"
The above statement is example of:
i. Whole-part relationship
ii. Inheritance
iii. Specialization
iv. Generalization

36) To help separate an object's external behaviour from its implementation, the technique used is called -------
i. Generalization
ii. Association
iii. Composition
iv. Abstraction

37) Sequences of messages can be present in:
(a) Use case diagram
(b) Sequence diagram
(c) Collaboration diagram
1) a only
2) b only
3) c only
4) b and c

38) Which of the following strategies lead to good software design:
i. Separation of concerns
ii. Modularity
iii. Divide-and-conquer
iv. All of the given options

39) Data flow model:
i. Captures the flow of data in a system
ii. Helps in developing an understanding of system's functionality
iii. Describes data origination, transformations and consumption in a system
iv. All of the given options

40) ------- requirements are often called product features.
i. Functional
ii. Non-functional
iii. Developer
iv. User

41) In the functional design, the structure of the system revolves around.
i. Objects
ii. Properties

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iii. Functions
iv. All of the given option

42) The first step in any OOA process model is to
i. Build an object-relationship model.
ii. Define collaborations between objects.
iii. Elicit customer requirements
iv. Select a representation language

43) The ------ relationship is kind of a generalization specialization relationship.
i. Bit-byte
ii. Uses
iii. Binary
iv. Extends

44) Regarding data flow model, which of the following statement(s) is true:
i. It captures the transformation of data between processes/functions of a system
ii. Processes on a data flow can operate in parallel
iii. Only those processes are represented which we need to automate
iv. All of the given option

45) ---------- is an extremely powerful technique for dealing with complexity.
i. Aggregation
ii. Abstraction
iii. Inheritance
iv. Association

46) In “point of sale system”. the term “payment” represents
i. Actor
ii. Participant
iii. Transaction
iv. Container

47) The architecture components for product engineering are
i. Data, hardware, software, people
ii. Data, documentation, hardware, software
iii. Data, hardware, software, procedures
iv. Documentation, hardware, people, procedures

48) An object model encompasses the principle(s) of
i. Abstraction
ii. Encapsulation
iii. Hierarchy or inheritance
iv. All of the given option

49) Prototyping is used when there is ---------- regarding requirements.
i. Uncertainty
ii. Confirmation
iii. Conflict
iv. Consensus

50) In ------- phase of software development, requirement analyst focuses on possible design of the proposed solution.
i. Maintenance
ii. Development
iii. Definition

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iv. Vision

51) At which stage of software development loop, results are delivered?
   i. Problem definition
   ii. Solution integration
   iii. Technical development
   iv. Status quo

52) A class will be cohesive if:
   i. Class does not implement complex interfaces
   ii. Class does not have complex methods
   iii. If most of the methods do not use most of the data members most of the time
   iv. If most of the methods use most of the data members most of the time.

53) A DFD is normally levelled (adding more levels of abstraction) as
   i. It is a good idea in design
   ii. It is recommended by many experts
   iii. It is easy to do it
   iv. It is easier to read and understand a number of smaller DFDs than one large DFD

54) Identify the true statement(s)
   i. An attribute that may have a number of values should be replaced by a new class and an object connection
   ii. An attribute that varies over time, e.g. price of an item, should be replaced by an additional class with an affective data and value
   iii. Replace “yes/no” type attribute with “status” type attributes for flexibility
   iv. All of given option

55) ---------- Is a technique in which we construct a model of an entity based upon its essential characteristics and ignore the inessential details.
   i. Inheritance
   ii. Polymorphism
   iii. Aggregation
   iv. Abstraction

56) A structure is a manner of an organization which expresses a ------ strong organization within the problem domain.
   i. Semantically
   ii. Syntactically
   iii. Graphically
   iv. None of the given

57) An object model of a system captures the ------ structure of a system.
   i. Static
   ii. Dynamic
   iii. Iterative
   iv. Hierarchical

58) To determine the architectural style or combination of styles that best fits the proposed system, requirements engineering is used to uncover
   i. Algorithmic complexity
   ii. Characteristics and constraints
   iii. Control and data
   iv. Design patterns

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59) Which statement is not according to the software engineering principles? Software engineering is a(n) _____
   i. Balancing act
   ii. Disciplined approach
   iii. Unsystematic approach
   iv. Quantifiable approach
60) In abbot's textual analysis technique, different part of speech is identified within the text of the specification and these part are modelled using different _____
   i. Event
   ii. Process
   iii. Operations
   iv. Components
61) Quantitative methods for assessing the quality of proposed architectural designs are readily available.
   i. True
   ii. False
62) In order to determine the role and responsibilities of the identified objects, we need to consider which of the following step(s):
   a) Who I am?
   b) What I know?
   c) Who I know?
   d) What I do?
   i. A only
   ii. A and b
   iii. B ,c and D
   iv. All of the given
63) In object oriented design _____ layer contains the details that enable each object to communicates with its collaborators.
   i. Subsystem
   ii. Responsibility
   iii. Message
   iv. Object
64) In sequence diagram, the boxes denote:
   i. Objects (or classes)
   ii. Messages, sent from one object to other
   iii. Life-time of objects
   iv. None of the given option
65) In "railway tickit reservation system" the roles such as enquiry. Reservation and ticketing and cancellation are to be performed by the user called:
   i. Passenger
   ii. System analyst
   iii. System developer
   iv. System designer
66) Class responsibilities are defined by _____
   i. Its attributes only
   ii. Its collaborators
   iii. Its operations only

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iv. Both its attributes and operations

67) Requirement engineering mainly deals with the _____ of the system
   i. Vision phase
   ii. Definition phase
   iii. Development phase
   iv. Maintenance phase

68) In UML based object oriented model of a system, a composition relation between two objects is shown by a _____ sign on the whole side of a relation line.
   i. An unfilled diamond
   ii. A filled diamond
   iii. A half diamond
   iv. A dot

69) _____ analysis educates the analyst on business domain complexity and shows a way to deal with it.
   i. Domain
   ii. Use case
   iii. Object collaboration
   iv. None of the given options

70) In this case of _____ intra component linkages are stronger while inter component linkages are weak.
   i. High cohesion
   ii. Low coupling
   iii. Low cohesion
   iv. High coupling

71) An architectural style encompasses which of the following elements?
   i. Constraints
   ii. Set of components
   iii. Semantic models
   iv. All of the given

72) In software engineering paradigm, any engineering approach must be founded on organizational commitment to _____
   i. Cost
   ii. Scheduling
   iii. Quality
   iv. Performance

73) Identify the true statement:
   i. Normally object oriented design is more maintainable than functional oriented.
   ii. Software with functional oriented design does not fulfil non functional requirements.
   iii. Object oriented design can not implement “separation of concerns” strategy
   iv. Function oriented design does not lead to an efficient product

74) A process in data flow diagram (DFD) represents
   i. Flow of data
   ii. Transformation of data
   iii. Storage of data
   iv. An external agent

75) A maintainable design is a design , which supports
   i. Change

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ii. Debugging
iii. Adding new features
iv. All of the given

76) Whole part structure is also called _____
i. Generalization
ii. Aggregation
iii. Specialization
iv. Association

77) _____ are kind of umbrella activities that are used to smoothly and successfully perform the construction activities.
i. Design activities
ii. Management activities
iii. Testing activities
iv. Maintenance activities

78) When you encounter both transform flow in the same DFD the flow is partitioned and the appropriate mapping technique is used on each part of the DFD.
i. True
ii. False

79) Software architecture must address ---------- requirements of a software system.
i. Functional
ii. Non-functional
iii. User Interface Requirements
iv. Both functional and non-functional.

80) To construct a system model the engineer should consider one of the following restraining factors.
i. Assumptions and constraints
ii. Budget and expenses
iii. Data objects and operations
iv. Schedule and milestones

81) A cohesive class is one which emphasizes on ---------- unit of functionality.
i. Single
ii. Multiple
iii. Static
iv. None

82) The best way to conduct a requirement validation review is to
i. Examine the system model for errors
ii. have the customer look over the requirements
iii. Send them to the design team and see if they have any concerns
iv. Use a checklist of the questions to examine each requirement

83) Defining the services of an object means:
i. What it does?
ii. What it knows?
iii. Who knows it?

84) Which one of the following is the external quality of a software product?
i. Correctness
ii. Concision
iii. Cohesion

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iv. Low coupling

85) In Data Flow Diagram, the entity or system, outside the boundary of this system is called:
   i. Process
   ii. Data flow
   iii. External agent
   iv. Data store

86) GUI stands for:
   i. Genaric user Interface
   ii. Graphical user interface
   iii. Genaric user interaction
   iv. Graphical user interaction

87) Specialization means:
   i. Calling the same method with the object of child object
   ii. Hiding the data
   iii. Creating new subclasses for an existing class
   iv. None of the given options

88) In a use case diagram, an ellipse signifies a(n):
   i. Actor
   ii. Class
   iii. Use case
   iv. System boundary

89) Software development is a step-by-step process, and in --------- phase of software development Business objective of an organization get cleared
   i. Maintenance
   ii. Development
   iii. Definition
   iv. Vision

90) If you try to make software more user-friendly then the --------- may suffer.
   i. Reliability
   ii. Software
   iii. Efficiency
   iv. Cost

91) In object-oriented design, the structure of the system revolves around.
   i. Objects
   ii. Properties
   iii. Methods
   iv. All of the given option

92) In -------- relationship, a class shares the structure and behaviour defined in another class:
   i. Aggregation
   ii. Composition
   iii. Inheritance
   iv. Uses

93) In Object Oriented Design, combining the services offered by an object with the attributes they work on, results in:
   (a) Lower coupling and strong cohesion
   (b) Lower cohesion and strong coupling
   (c) Increased likelihood of reuse

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(d) Decrease the modularity of the system

i. A only
ii. B and c only
iii. A and c only

94) A change becomes ---------- because of close presence of data and functions.

i. Accessible
ii. Global
iii. Private
iv. Localized

95) Software engineering is a ---------- approach.

i. Systematic
ii. Disciplined
iii. Scheduled
iv. All of the given options

96) An external entity that interacts with the system is called a(n):

i. Use case
ii. Actor
iii. Stakeholder
iv. Association

97) More powerful hardware resulted into the development of ----------powerful and --------- software.

i. Less, complex
ii. More , complex
iii. More, simple
iv. Less, simple

98) A context diagram is used:

i. As a first step in developing a detailed DFD of a system
ii. In systems analysis of very complex systems
iii. As an aid to system design
iv. As an aid to programmers

99) " System should maintain transaction log of every system"
The above statement is an example of:

i. Functional requirement
ii. Non-functional requirement
iii. Pseudo requirement
iv. None of these

100) The architectural model provides the software engineer with the view of the system as a whole:

i. True
ii. False

101) As per Peter Coad's methodology , which of the following may not be a perfect candidate for being an object?

i. Zone
ii. Recipient
iii. Garage
iv. Password

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102) In the case of ---------- approach , data is decomposed according to functionality requirements.

i. Object-oriented
ii. Action-oriented
iii. Event-oriented
iv. Process-oriented

103) In UML based Object Oriented Model of a system, the diamond sign is used to depict ---------- relations between two objects/classes.

i. Aggregation and Association
ii. Inheritance and Association
iii. Composition and Aggregation
iv. Composition, Aggregation and Association

104) The system specification describes the:

i. Function and behavior of a computer-based system
ii. Implementation of each allocated system element
iii. Algorithmic detail and data structures
iv. Time required for system simulation

105) In object oriented approach, ---------- are the people and organizations that take part in the system under consideration:

i. Actors
ii. Places
iii. Participants

106) Software Design discusses ---------- aspect of software development.

i. What
ii. How
iii. Who
iv. When

107) ---------- requirements cause frequent modifications in user interface.

i. Functional
ii. Non-functional
iii. Unstable
iv. User

108) By levelling a DFD (adding more levels of abstraction) we mean:

i. Splitting it into different levels
ii. Make its structure uniform
iii. Expanding a process into one with more sub-processes giving more detail
iv. Summarizing a DFD to specify only these essentials

109) A “register” in “Point of Sale system” is an example of:

i. Actor
ii. Participant
iii. Tangible thing
iv. Transaction

110) ---------- is a set of processes and tools to develop software.

i. Software engineering
ii. Information
iii. Software
iv. None of the given

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111) The ---------- on which program operates is also considered as part of the software.
   i. Data
   ii. Information
   iii. Program
   iv. None of the given

112) ---------- diagram provides a time-based view and collaboration diagrams which provide an organization based view of the system's dynamics.
   i. Data flow diagram
   ii. Entity relationship diagram
   iii. Class diagram
   iv. Sequence diagram

113) Synchronous messages are "call events" and are denoted by ----------
   i. Full arrow
   ii. Half arrow
   iii. <<create>>
   iv. <<destroy>>

114) Which of the following are the components of system engineering software?
   i. Process
   ii. Methods
   iii. Tools
   iv. All of the given

115) Identifying system features include ----------
   i. Log important information
   ii. Conduct business
   iii. Analyze business results
   iv. All of the above

116) ---------- is yet another technique that is used to reduce customer dissatisfaction at the requirement stage.
   i. Study of similar systems
   ii. Site visits
   iii. Prototyping
   iv. All of the above

117) Data store notation in DFD represents:
   i. Data input
   ii. Data output
   iii. Data input and data output
   iv. None of the above

118) The process of defining attributes is called ----------
   i. Who know me?
   ii. What I know?
   iii. Whom I know?
   iv. All of the above

119) The output of the design process is a description of the:
   i. Software architecture
   ii. Software Code
   iii. Software
   iv. All of the above

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120) Which of the following are the levels of software requirements?
   i. Business requirements
   ii. User requirements
   iii. Functional requirements
   iv. All of the above

121) Given below are some statements associated with data flow diagrams. Identify the correct statement among them.
   i. Data flow is made used of to model what systems do
   ii. Flows of data can take place from a process to a sink
   iii. Context diagrams shows the major system processes
   iv. All processes have to be labelled or decomposed

122) In which of the following diagram the actors and attributes are represented with system boundary?
   i. Data flow diagram
   ii. Entity relationship diagram
   iii. Class diagram
   iv. Use case diagram

123) _____ is real looking mock_up of what would be eventually delivered and might not do anything useful.
   i. Study of similar system
   ii. Site visits
   iii. Prototyping
   iv. All of the above

124) _____ is blueprint for software construction.
   i. Object oriented design
   ii. Sequence design
   iii. Software design
   iv. All of the above

125) _____ requirements lead to ill-spent time and rework.
   i. Unacceptable
   ii. Ambiguous
   iii. Dissatisfaction of customer
   iv. None of the above

126) Which type of diagram is used to depict the dynamic behaviour of a system.
   i. ERD diagram
   ii. DFD diagram
   iii. Class diagram
   iv. Collaborations diagram

127) What is the most crucial non-functional requirement of a system to control radiation dosages that are emitted as treatment for cancer?
   i. Security
   ii. Reliability
   iii. Easy usability
   iv. Accuracy

128) A better design has an objective achieve
   i. High cohesion
   ii. Low cohesion

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iii. Low coupling
iv. High cohesion and low coupling

129) Which of the following are trhe components of software engineering framework is combine the three remaining components?
i. Process
ii. Method
iii. Tools
iv. All of the above

130) In sequence diagrams the time required by the receiver object to process the message is denoted by an _____
i. Activation box
ii. Message line
iii. Life line
iv. All of the above

131) How many types of OOD modes have _____.
i. One
ii. Two
iii. Three
iv. Four

132) Which notation is used to represent the process of the system in DFD model.
i. Process
ii. External agent
iii. Data flow
iv. Data store

133) Requirement engineering mainly deals with the _____ of the system
i. Process
ii. Maintenance
iii. Development phase
iv. Definition phase

134) Insufficient user involvement leads to _____ products.
i. Unacceptable
ii. Ambiguous
iii. Dissatisfaction of customer
iv. None of the above

135) Collaboration diagrams have basically two types of components: objects and _____
i. Messages
ii. Method
iii. Classes
iv. None of the above

136) In object-oriented analysis how many number of tasks must occurs _____.
i. 1
ii. 2
iii. 3
iv. None of the above

137) State transition diagram is helpful in determining _____.
i. Data store
ii. Process flow

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iii. Business understanding
iv. None of the above

138) In sequence diagram events are organized in a _____ time life line.
i. Vertical
ii. Horizontal
iii. Both A and B
iv. All of the above

139) Asynchronous messages are “signals,” denoted by _____.
i. Full arrow
ii. Half arrow
iii. <<create>>
iv. <<destroy>>

140) When we write a program for computer and then we named it as _____ .
i. Data
ii. Information
iii. Software
iv. None of the given

141) Context level diagram present in which of the following document.
i. SRS-software requirement specification
ii. Design document
iii. Test phase
iv. All of the above

142) _____ is diagram in which objects are interact with each other and these are arranged in a sequence.
i. ERD diagrams
ii. Inheritance diagrams
iii. Class diagrams
iv. Sequence diagrams

143) Which of the following layers are include in object-oriented design?
i. The subsystem layers
ii. The class and object layer
iii. All of the above
iv. The message layers

144) Which notation is used to represent the boundary of the system in DFD model?
i. Process
ii. External agent
iii. Data flow
iv. Data store

145) Identifying whole-part structures (aggregations) means what are my _____.
i. Components
ii. Structures
iii. Class
iv. Object

146) An object or class may further be classified on the basis of _____ .
i. Behaviour driven attributes
ii. Data driven attributes
iii. Responsibility driven attributes

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iv. All of the above

147) DFD notation contains
i. Process
ii. External agent
iii. Data flow
iv. All of the above

148) The doted lines in sequence diagram are called ____ .
i. Life line
ii. Message line
iii. Entities line
iv. All of the above

149) An object may create another object via a _____ message .
i. Full arrow
ii. half arrow
iii. <<create>>
iv. <<destroy>>

150) How many levels of software requirements are _____?
i. One
ii. Two
iii. Three
iv. Four

151) Which of the following diagram has iterative activities?
i. Data flow diagram
ii. Entity relationship diagram
iii. Class diagram
iv. Use case diagram

152) Which of the items listed below is not one of the software engineering layers?
i. Tools
ii. Manufacturing
iii. Process
iv. Methods

153) Coupling is a measure of _____ a module or component.
i. Independent
ii. Dependent
iii. Closeness
iv. All of the given

154) Software maintenance phase involves
i. Debugging
ii. Adding new features
iii. Making changes
iv. All of the given

155) The hardest single part of building a software system is deciding precisely _____ to build.
i. When
ii. What
iii. Why
iv. All of the given

156) Interaction diagrams depict the ____ behaviour of the system.

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i. Static
ii. Active
iii. Dynamic
iv. None of the given

157) A _____ can be used to describe the dynamic behaviour of an object-oriented system.
i. ERD diagrams
ii. Inheritance diagrams
iii. Class diagrams
iv. Series diagrams

158) The Use case diagram shows that which ____ interact with each use case.
i. Use case
ii. Actor
iii. Component
iv. Relation

159) Transactions are the _____ that must be remembered through time.
i. Events
ii. Action
iii. Triggers
iv. Methods

160) A necessary supplement to transform or transaction mapping needed to create a complete architectural design is
i. Entity relationship diagrams
ii. The data dictionary
iii. Processing narratives for each module
iv. Best cases for each module

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