



SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : SADP (13A05701)

Course & Branch: B.Tech - CSE

Year & Sem: IV-B.Tech & I-Sem

Regulation: R13

UNIT-I

Introduction, Architectural Styles, Shared Information Systems

- 1 What is Software architecture and Explain software design levels. [L2, L3]/10M
- 2 What is engineering? and explain. [L2]/10M
- 3 Explain the current state of software technology. [L2]/10M
- 4 Write briefly about the database integration in shared information systems. [L3]/10M
- 5 Examine the following
 - A) Architecture styles [L3]/5M
 - B) Pipes and Filters [L3]/5M
- 6 Explain the following
 - A) Data Abstraction and Object- Oriented Organization [L3]/5M
 - B) Layered systems [L3]/5M
- 7 Explain
 - A) Repositories [L3]/5M
 - B) Interpreters [L3]/5M
- 8 Explain the process control in detail. [L2]/10M
- 9 Explain the Event-based, Implicit Invocation. [L2]/10M
10. Define the following terms
 - A) Software architecture B) Architectural styles C) process control
 - D) Heterogeneous architecture E) Shared information Systems

UNIT-II**Introduction, Creational Patterns**

1. What is meant Design Patterns? Elaborate their advantages. [L3]/10M
2. Explain the applicability, structure, participants, consequences and implementation of Abstract Factory trend. [L2]/10M
3. Depict the dynamic behavior of MVC with any one scenario . [L1,L3]/10M
4. Explain the organization of design patterns. [L2]/10M
5. Briefly explain the catalog of design patterns. [L2, L3]/10M
6. Write about the how to solve the design problems by design patterns. [L3,]/10M
7. Explain Prototype Pattern Structure, Consequences and Implementation. [L3]/10M
8. Describe Builder pattern Intent, Motivation and its Structure. [L2]/10M
9. How to select a Design pattern. Briefly explain How to use a design pattern. [L2, L3]/10M
10. Define the following terms
A) Abstract Factory B) Builder C) Prototype D) singleton E) Factory method

UNIT-III**Structural Pattern Part-I & Part II**

1. Explain briefly about Adapter Pattern. [L2]/10M
2. Explain Decorator Pattern Structure, Consequences and Implementation. [L2]/10M
3. Write in detail about Façade Structural Pattern. [L3,L4]10M
4. What is intent of Bridge Structural Pattern and explain all the sections. [L3]10M
5. Describe Composite pattern Intent, Motivation and its Structure. [L2]/10M
6. Discuss Flyweight structural Pattern. [L1,L3]10M
7. Write in detail about Proxy Structural Pattern. [L3,L4]10M
8. Write briefly about any four structural patterns. [L3,L4]10M
9. Explain Decorator Intent, Motivation, participants. [L2]/10M
10. Define the following terms
A) Adapter B) bridge C) Decorator D) Façade E) Proxy

UNIT-IV**Behavioral Patterns Part-I**

- 1 Describe Chain of Responsibility pattern Intent, Motivation and its Structure. [L2]/10M
- 2 Write Iterator Pattern with simple example. [L2,L3]/10M
- 3 What is the intent of Interpreter Pattern? Explain with Example. [L2]/10M
- 4 Write in detail about Mediator Behavioral Pattern. [L3]/10M
- 5 Explain Command Structural Pattern. [L2,L3]/10M
- 6 Discuss Observer Behavioral Pattern. [L1,L3]/10M
- 7 Describe Memento pattern Intent, Motivation and its Structure. [L2]/10M
- 8 Write briefly about any 4 behavioral patterns. [L3,L4]/10M
- 9 Explain the Interpreter Consequences and Implementation. [L2]/10M
- 10 Define the following terms
A) Command B) Iterator C) Mediator D) Interpreter E) Observer

Unit – V**Behavioral Patterns Part-II**

1. Explain the implementation of state pattern. [L2]/10M
2. Write about the strategy pattern. [L3]/10M
3. Explain the implementation of template pattern. [L2]/10M
4. Explain briefly about visitor pattern. [L2]/10M
5. Explain the design patterns? Write about supporting multiple window systems. [L2, L3]/10M
6. What are the suggested standard organization points for view documentation? [L1, L2]/10M
7. What is the intent uses and related pattern of template method? [L1, L2]/10M
8. What are the uses of architectural documentation? Bring out the concept of view as applied to architectural documentation. [L1, L2]/10M
9. Write detailed notes on support multiple window systems, user operations . [L3, L4]/10M
10. Define the following terms
A) state B) Template method C) visitor D) Strategy E) Design problems



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UNIT-I

Introduction, Architectural Styles, Shared Information Systems

1. Which among are structural issues of software architecture? []
A. The assignment of functionality to design elements B Scaling and performance
C Both A & B D.Dimensions of revolution
2. Usually, architectures are represented abstractly as _____ diagrams []
A. Box-and-line B.Box-and-box . C.Box-and-point D.Circle-and-box
3. The _____ of a software system defines that system in terms of computational components and interactions among those components. []
A. Design B.Architecture C.Both A & B D.None
4. which is not design level of software []
A. Architecture B.Code C.Executable D.None
5. _____ is the level where the design issues involve algorithms and data structures.[]
A. Architecture C. Design
B. Executable D. Code
6. Which is the one of the computer hardware design level _____ []
A. PNS level C. Circuit level
B. Coding level D. None
7. Switching circuits is sub level of _____ level in computer hardware design level []
A. Circuit level C. Logic-design level
B. Programming level D. PNS level
8. The phrase **Software Engineering** was coined in the year_____ []
A. 1967 C. 1969
B. 1968 D. 1986
9. _____ has always been a major factor in determining the success of a software system. []
A. Good architectural design B. Good coded program

- C. Well analyzed requirements
D. None
10. Architectural issues are being addressed by work in areas like []
A. Module interface languages
C. Software reuse
B. Domain-specific architecture
D. All
11. At the architectural level, software organization styles are often associated with phrases such as _____ []
A. Client-server system
C. Layered architecture
B. Pipe-filter design
D. All
12. An architectural style defines a _____ of components and connector types. []
A. Meaning
C. Vocabulary
B. Procedure
D. Syntax
13. Which of the following are common architectural style []
A. Data flow systems
C. Both A & B
B. Virtual machines
D. None
14. In _____ style each component has a set of inputs and set of outputs. []
A. Architectural
C. Both A & B
B. Pipe-and-filter
D. None
15. In Pipe-and-filter style connectors are termed as _____ []
A. Filters
C. Both A & B
B. Pipes
D. None
16. _____ restrict the topologies to linear sequences of filters []
A. Pipes
C. Pipelines
B. Filters
D. Bounded pipes
17. Bounded pipes restrict the amount of data that can reside on a _____ []
A. Filter
C. Pipe line
B. Pipes
D. None
18. The best known examples of pipe-and-filter architectures are programs written in the []
A. C
C. Python
B. Java
D. Unix shell
19. Pipes and can also applied in _____ []
A. Signal-processing domain
C. Functional programming
B. Parallel programming
D. All
20. object are examples of a type of component in data abstraction, we generally call as ____ []
A. Mangers
B. Procedures

- C. Functions
D. All
21. objects are interact through _____ invocations []
A. Function and Procedure
C. Procedure and Program
B. Function and Program
D. None
22. In a object-oriented systems components typically interact with each other _____ invoking those routines. []
A. Implicitly
C. Both A & B
B. Explicitly
D. None
23. Among the following which is alternate method for explicit invocation []
A. Implicit invocation
C. Selective broadcast
B. Reactive integration
D. All
24. Benefit of implicit invocation is that it provides strong support for _____ []
A. Reuse
C. Rely
B. Recycle
D. Relinquish
25. A layered system organized _____ []
A. Randomly
C. Hierarchically
B. In a order
D. None
26. Each layer is serving as a client to the _____ layer. []
A. Server
C. Both
B. Client
D. None
27. The most widely known examples of this kind of architectural style are _____ []
A. Layered communication protocol
C. Both A & B
B. Layered communication protocol
D. None
28. Which among is desirable properties of layered systems? []
A. They support designs based on increasing level of abstraction
B. They support enhancement
C. They support reuse
D. All
29. which is among components of data repositories? []
A. A central data structure represents the current state
B. Collection of dependent components operate on the central data store
C. Both A & B
D. None
30. How many sub categories are there for repository? []
A. 3
C. 5
B. 4
D. 2
31. The balck board model is usually present _____ mojour parts []

- A. 3
B. 4
- C. 5
D. 2
32. interactions among knowledge sources takes place solely through _____ []
A. Traditional database
B. Blackboard
C. Both A & B
D. None
33. In a/an _____ organization a virtual machine is produced in software []
A. Repository
B. Layered systems
C. Process control
D. Interpreters
34. An interpreter generally has _____ components []
A. 5
B. 4
C. 2
D. 1
35. _____ system organization is not widely recognized in software community []
A. Interpreters
B. Layered systems
C. Process control
D. Interpreters
36. _____ designs are characterized by the kind of components involved and the special relations that must hold among them. []
A. Object oriented
B. Functional design
C. Control-loop
D. All
37. _____ are other familiar architectures []
A. Distributed process
B. Man program
C. State transmission system
D. All
38. _____ is/are domains where shared information systems are appear []
A. Data processing
B. Software development environments
C. Building design
D. All
39. The earliest software developments tools were _____ []
A. Stand-alone programs
B. Client-Server programs
C. Both A & B
D. None
40. the data flow architecture that repeatedly occurs in the evolution of shared information system is _____ []
A. Batch sequential
B. Match sequential
C. Code sequential
D. None

UNIT-III

Structural Pattern Part-I & Part II

1. A____ pattern compose objects in to tree structures to represent part-hole hierarchy []
 A Adapter B. Bridge C. Composite D. None
- 2____ Pattern Decouple an abstraction from its implementation []
 A Decorator B. Composite C. Facade D. Bridge
- 3Which of the following is not structural pattern _____ []
 A. Facade B. Bridge C. Iterator D. Decorator
- 4__ pattern is used to create a reusable class that cooperate with unrelated classes []
 A Bridge B. Adapter C. Facade D. Composite
- 5____ is the related pattern of bridge pattern []
 A Builder B. Adapter C. Facade D. Composite
- 6__ pattern converts one interface of a class to another Interface []
 A Decorator B. Composite C. Flyweight D. Adapter
- 7Flyweight pattern also known as____ []
 A Wrapper B. Policy C. Transaction D. None
- 8Adapter pattern also called as _____ []
 A. Wrapper B. Body C. Handle D. None
- 9.____ define higher-level interface that makes the sub system easier to use []
 A. Decorator B. Composite C. Facade D. State
- 10.Which of the following is structural pattern _____ []
 A. Composite B. Builder C. Iterator D. None
- 11.____ pattern is used to controlled access to object []
 A Bridge B. Iterator C. Facade D. Proxy
- 12.____ is Advantage of bridge pattern []
 A.Extensibility B. Hiding implementation details C. Only one implementer D. None
- 13.____ pattern also known as surrogate []
 A.Bridge B. Proxy C. Mediator D. Strategy
- 14.____ pattern provides a unified interface to a set of interfaces in a subsystems []
 A.Decorator B. Composite C. Flyweight D. Facade
- 15 Decorator pattern is also known as _____ []
 A. Wrapper B. Body C. Handle D. Kit
- 16____ pattern use sharing to support large number of fine-grained objects effectively []

- A.Decorator B. Composite C. Flyweight D.State
 17 Façade pattern is also known as _____ []
- A. Wrapper B. Policy C. Transaction D. None
 18 _____ pattern is the related pattern to the Façade pattern []
- A. Flyweight B. Abstract Factory C. Strategy D.State
 19RTF Stands for _____ []
- A. Rich Table Format B. Rich Text Format C. Random Text Format D.None
 20 _____ pattern lets clients treat individual objects and compositions
 of objects uniformly []
- A. Bridge B. Strategy C. Proxy D.Composite
 21 Bridge pattern is also known as _____ []
- A. Wrapper B. Handle C. Transaction D. None
 22 ____ pattern has a structure similar to an object adapter []
- A.strategy B.bridge C.composite D.all
 23 _____ pattern is often used with composite pattern []
- A.bridge B.decorator C.proxy D.none
 24 ____ pattern can be viewed as a degenerate composite with only one component []
- A. adapter B.facade C.bridge D.decorator
 25_____ pattern is often combine with the composite pattern to implement a DAG []
- A.proxy B.facade C.Flyweight D.all
 26____ pattern can have similar implementations as proxy pattern []
- A.decorator B.facade C.flyweight D.adapter
 27 In _____ pattern a class represents functionality of another class []
- A.proxy B.chain of responsibility C.command D.facade
 28 ____ pattern is used to create part-hole hierarchy of objects []
- A Decorator B. Composite C. Facade D. State
 29 The _____ pattern is also known as Wrapper []
- A Decorator B. Composite C. Adapter D. State
 30 The _____ pattern is also known as body []
- A Decorator B. Composite C. Adapter D. Bridge
 31 Proxy pattern is also known as _____ []
- A. Wrapper B. Handle C. Surrogate D. None
 32 _____ is one of the participants of Adpter method []
- A.Abstraction B Implementor C. Adaptee D. all

- 33 _____ participant adapts the interface of adaptee to the target interface []
A client B adapter C adaptee D target
- 34 _____ is one of the participants of Bridge pattern []
A. Abstraction B client C. Adaptee D. leaf
- 35 _____ participant in composite defines behavior for components having children []
A client B leaf C component D composite
- 36 _____ is one of the participants of Composite pattern []
A. Abstraction B target C. Adaptee D. leaf
- 37 _____ is one of the participants of Facade pattern []
A. Abstraction B Facade C. Adaptee D. leaf
- 38 _____ participant in flyweight creates and manages flyweight objects []
A Flyweightfactory B client C flyweight D none
- 39 _____ is one of the participants of Proxy pattern []
A. Abstraction B client C. Subject D. leaf
- 40 _____ participant in proxy defines the real object that the proxy represents []
A Proxy B Realobject C subject D none

UNIT-IV

Behavioral Patterns Part-I

- 1 _____ avoids coupling the sender of a request to its receiver by intermediating more than one object []
 A Mediator B. Flyweight C. Chain of Responsibility D. Adapter
- 2 Observer pattern also known as _____ []
 A. Wrapper B. Policy C. Transactions D. Dependants
- 3 Command pattern also known as _____ []
 A Policy B. Action C. Help D. None
- 4 _____ pattern is the related pattern of Chain of Responsibility []
 A Mediator B. Composite C. Decorator D. Bridge
- 5 _____ pattern define an object that encapsulates how a set of objects interacts []
 A Memento B. Mediator C. Iterator D. None
- 6 Publish-Subscribe is another name for _____ pattern []
 A Mediator B. Composite C. Decorator D. Observer
7. Iterator pattern also known as _____ []
 A. Curser B. Handle C. Surrogate D. None
8. _____ pattern encapsulate a request as an object []
 A. Adapter B. Decorator C. Command D. Bridge
9. _____ pattern provides a way to access the elements of an aggregate object sequentially []
 A. Command B. Composite C. Iterator D. Bridge
- 10 Which of the following is not a Behavioral pattern? []
 A. Command B. Iterator C. Proxy D. State
- 11 GUI stands for _____ []
 A. Graphical User Interaction B. Graphical User Interface C Graphical User Input D None
- 12 Transaction is the known for _____ pattern []
 A. Command B. Composite C. Adapter D. Bridge
- 13 _____ pattern is used to decouple senders and receivers by giving multiple objects []
 A. Proxy B. Chain of Responsibility C. Flyweight D. State
- 14 In _____ pattern a request is wrapped under an object as command and passed to invoker Object []
 A. proxy B. interpreter C. command D. composite
- 15 _____ pattern is used to restore state of an object to a previous state []
 A. iterator B. mediator C. observer D. memento

- 16 ____ pattern can keep state the command pattern requires to undo its effect []
 A.interpreter B. memento C. composite D.none
- 17 The interpreter can use an ____ pattern to traverse the structure []
 A.composite B.state C.iterator D.mediator
- 18 Colleagues can communicate with the mediator using the ____ pattern []
 A.observer B.memento C façade D.iterator
- 19 Memento pattern also known as____ []
 A. Curser B. Handle C. Surrogate D. Token
- 20 Command pattern can use ____ pattern to maintain state for undoable operations []
 AMediator B.memento C. iterator D. observer
- 21 ____is one of the participant of chain of responsibility pattern []
 A handler B command C client D all
- 22 ____participant indicates the request to a ConcreteHandler object on the chain []
 A handler B client C concretehandler D none
- 23 ____is one of the participant of Command pattern []
 A handler B command C context D all
- 24 ____participant in Command asks the command to carry out the request []
 A Receiver B command C invoker D client
- 25 ____is one of the participant of Interpreter pattern []
 A handler B command C terminalexpression D context
- 26 ____participant in Interpreter contains the information that is global to interpreter []
 A client B context C terminalexpression D none
- 27 ____participant in interpreter is an instance is required for every terminal symbol []
 A client B context C terminalexpression D none
- 28 ____is one of the participant of Iterator pattern []
 A ConcreteIterator B command C terminalexpression D context
- 29 ____participant in Iterator defines an interface for creating an iterator object []
 A Iterator B aggregate C concreteiterator D concreteaggregate
- 30 ____participant in iterator implements the iterator interface []
 A Iterator B aggregate C concreteiterator D concreteaggregate
- 31 ____is one of the participant of Mediator pattern []
 A ConcreteMediator B command C terminalexpression D context
- 32 __participant in Mediator specifies each colleague class knows its mediator object []
 A Mediator B colleague classes C concretemediator D none

- 33 ___participant defines an interface for communicating with colleague objects []
A Mediator B colleague classes C concretemediator D none
- 34 ___is one of the participant of Memento pattern []
A ConcreteMediator B command C terminalexpression D Caretaker
- 35 ___participant in memento stores the internal state of originator object []
A originator B Memento C caretaker D all
- 36 ___participant in memento is responsible for the mementos safekeeping []
A originator B Memento C caretaker D all
- 37 ___is one of the participant of Observer pattern []
A ConcreteMediator B concreteObserver C terminalexpression D Caretaker
- 38 ___participant in observer stores the state of interest to concreteobserver objects []
A ConcreteObserver B subject C ConcreteSubject D observer
- 39 ___participant in observer maintains a reference to a concretesubject object []
A ConcreteObserver B subject C ConcreteSubject D observer
- 40 ___participant in command defines a binding between a receiver object & an action []
A command B ConcreteCommand C Invoker D receiver

Unit – V

Behavioral Patterns Part-II

- 1 state is also known as _____ []
 A. objects for states B. policy C. abstract class D. concrete class
- 2 strategy is otherwise called____ []
 A. objects for states B. policy C. abstract class D. concrete class
- 3 Number of participants present in the state____ []
 A. 1 B. 2 C. 4 D. 3
- 4 Number of participants present in the strategy____ []
 A. 3 B. 4 C. 1 D. 2
- 5 Context and concrete subclasses are the participants of ____ []
 A. strategy B. template method C. strategy D. state
- 6 context is the participant of____ []
 A. strategy B. state C. template method D. visitor
- 7 state objects are often _____ []
 A. adapter B. flyweight C)singletons D. visitor
- 8 concrete state subclasses is the participant of _____ []
 A. strategy B. state C template method D. visitor
- 9 strategy objects often make good _____ []
 A. state B. command C. mediator D. flyweights
- 10 abstract class and concrete class are the participants of____ []
 A. visitor B. memento C. template method D. state
- 11 Factory methods are often called by____ []
 A. visitor B. template method C. command D. state
- 12 visitor may be applied to do the interpretation____ []
 A. adapter B. flyweight C. interpreter D. command
- 13 A strategy object encapsulates an algorithm____ []
 A. state B. fly weight C. strategy D. bridge
- 14 A state object encapsulates a state -dependent behavior____ []
 A. state B. command C. bridge D. command
- 15 Element is the participant of____ []
 A. command B. visitor C. adapter D. command
- 16 Encapsulation variation is a theme of many____ []

- A. creational patterns B. structural patterns C. design patterns D. behavioral patterns
- 17 Objectstructure is the participant of____ []
 A. flyweight B. visitor C. composite D. state
- 18 strategy is the participant of ____ []
 A. command B. visitor C. strategy D. state
- 19 steps of an algorithm is called____ []
 A) template Method B) state C)singleton D)strategy
- 20 states of an object is known as____ []
 A)visitor B)command C)state D)composite
- 21 How many problems in Lexi's design []
 A)seven B)six C) four D)eight
- 22 which of the following Lexi's design problems []
 A)document structure B)formatting C)user operations D)all the above
- 23 ____To represent the document's physical structure []
 A. composite B. strategy C. bridge D. command
- 24 A common way to hierarchically structured information through a technique called []
 A. document structure B. formatting C. recursive function D. glyphs
- 25 ____To allow multiple windowing platforms []
 A. composite B. bridge C. adapter D. iterator
- 26 Well defined a subclass of Glyph called ____ []
 A. MonoGlyph B. Recursive function C. Glyph D. bridge
- 27 the pattern capture class and object relationships []
 A. state B. visitor C. state D. decorator
- 28 which of the following state participants []
 A. context B. state C. concreteState subclasses D. all the above
- 29The object will appear to change its class__ []
 A. command B. visitor C. state D. strategy
- 30 object encapsulates the protocols between objects____ []
 A. Mediator B. State C. Command D. Memento
- 31The interface of interest to clients____ []
 A. command B. visitor C. context D. state
- 32Each subclass implements a behavior associated with a state of a context ____ []
 A. context B. state C. structure D. ConcreteState subclasses
- 33which implements the algorithm strategy interface []

- A. concretestrategy B. state C. visitor D. command
- 34 _____ Implements the primitive operations to carry out subclass-specific steps of the algorithm []
- A. state B. concrete class C. abstract class D. colloborations
- 35 Defines an accept a Operation that takes a visitor as an argument___ []
- A. element B. visitor C. concrete element D. object structure
- 36 how many design patterns []
- A. 23 B. 22 C. 20 D. 24
- 37 ___visitors can be used to apply an operation over an object structure []
- A. state B. composite C. state D. memento
- 38 ___To allow different formatting algorithms []
- A. state B. flyweight C. command D. strategy
- 39 which of the following not Lexi's design problems []
- A. document structure B. formatting C. user operations D. all the above
- 40 which of the following not a state participants []
- A. context B. state C. concrete State subclasses D. all the above