|  |  |
| --- | --- |
| A logo with a flower and a banner  AI-generated content may be incorrect. | GEETHANJALIINSTITUTEOFSCIENCE&TECHNOLOGY  (ANAUTONOMOUS INSTITUTION)  (Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu) (Accredited by NAAC with “A” Grade, NBA(EEE,ECE&ME)&ISO9001:2008 Certified Institution) |
| QUESTION BANK (DESCRIPTIVE)  **Subject Name: Design Patterns**  **Course & Branch :** B.Tech & CSE(DS) & (CS)  **Year & Semester: IV B.Tech I Semester**  **Regulation:** RG22 | |

Unit-1

|  |  |  |
| --- | --- | --- |
| **S.No** | **2 Marks Questions (Short)** | **[BT**  **Level][CO][Marks]** |
| 1 | Define design pattern. | L1, CO1, 2 M |
| 2 | What are the essential elements of Design patterns? | L1, CO1, 2 M |
| 3 | Define MVC | L1, CO1, 2 M |
| 4 | Why MVC used in small talk 80? | L1, CO1, 2 M |
| 5 | What is tool kit? | L1, CO1, 2 M |
| 6 | What are abstract classes? | L1, CO1, 2 M |
| 7 | Give the difference between design patterns and frame work? | L1, CO1, 2 M |
| 8 | What are the catalog of design patterns? | L1, CO1, 2 M |
| 9 | Classify design patterns. | L1, CO1, 2 M |
| 10 | What is prototype? | L1, CO1, 2 M |

|  |  |  |
| --- | --- | --- |
| **S.No** | **Descriptive Questions (Long)** | **[BT Level] [CO][**  **Marks]** |
| 1 | What is Design pattern? Explain the essential elements of a Design pattern? | L2, CO1, 12M |
| 2 | Explain design patterns in small talk MVC. | L2, CO1, 12M |
| 3 | How to describe design patterns? Explain. | L, CO1, 12M |
| 4 | Explain how design patterns solve design problems. | L2, CO1, 12M |
| 5 | How to select design patterns?Explain? | L2, CO1, 12M |
| 6 | Explain the catalog and organizing the Catalog of design patterns. | L2, CO1, 12M |
| 7 | How to use a design patterns. Explain? | L2, CO1, 12M |
| 8 | What should be variable in design pattern? Explain. | L2, CO1, 12M |
| 9 | Explain Reusability Mechanism with Suitable Examples? | L2, CO1, 12M |
| 10 | Write a short Note on Object Implementation with suitable examples? | L2, CO1, 12M |

**UNIT-2**

|  |  |  |
| --- | --- | --- |
| **S.No** | **2 Marks Questions (Short)** | **[BT**  **Level][CO][Marks]** |
| 1 | What are Design Problems? | L1, CO1, 2 M |
| 2 | Define document structure. | L1, CO1, 2 M |
| 3 | Define formatting | L1, CO1, 2 M |
| 4 | What are problems and constraints in Formatting | L1, CO1, 2 M |
| 5 | Define Embellishing the User Interface | L1, CO1, 2 M |
| 6 | Define Supporting Multiple Look-And-Feel Standards | L1, CO1, 2 M |
| 7 | Define Spell Check and Hyphenation. | L1, CO1, 2 M |
| 8 | What is Recursive Composition? | L1, CO1, 2 M |
| 9 | List the different patterns to Lexi's design. | L1, CO1, 2 M |
| 10 | What is Iterator Class and Subclasses | L1, CO1, 2 M |

|  |  |  |
| --- | --- | --- |
| **S.No** | **Descriptive Questions (Long)** | **[BT Level] [CO][**  **Marks]** |
| 1 | List and Explain design problems in Lexi user interface. | L2, CO2, 12M |
| 2 | Write a Short Note on document structure and formatting design problem with its Structure? | L2, CO2, 12M |
| 3 | Explain the Glyph and MonoGlyph classes? | L2, CO2,  12M |
| 4 | Illustrate the Motivation,Structure and Intent of Abstract Factory design pattern? | L2, CO2, 12M |
| 5 | Explain the Intent,Collaboration and Consequences of Builder design pattern? | L2, CO2, 12M |
| 6 | Illustrate the Intent,Applicability,Participants and sample Code of Factory Method pattern . | L3, CO2, 12M |
| 7 | Explain the Consequences,Intent and Sample Code of Prototype patterns? | L2, CO2, 12M |
| 8 | Explain Supporting Multiple Window Systems in lexi user interface in design Patterns? | L2, CO2, 12M |

|  |  |  |
| --- | --- | --- |
| 9 | Explain the User Operations in lexi user interface with a user Intrerface?. | L2, CO2, 12M |
| 10 | Explain the Consequences, Intent and Sample Code of Singleton patterns? | L2, CO2, 12M |

**Unit-3**

|  |  |  |
| --- | --- | --- |
| **S.No** | **2 Marks Questions (Short)** | **[BT**  **Level][CO][Marks]** |
| 1 | What is motivation of flyweight design pattern? | L1, CO3, 2M |
| 2 | What is the motivation of bridge pattern? | L1, CO3, 2M |
| 3 | What are the structural patterns? | L1, CO3, 2M |
| 4 | What is the applicability of flyweight? | L1, CO3, 2M |
| 5 | List the collaborations of proxy pattern? | L1, CO3, 2M |
| 6 | What are the uses of composite pattern | L1, CO3, 2M |
| 7 | List the Advantages of structural patterns | L1, CO3, 2M |
| 8 | What are the types of intent? There are two types of intents? | L1, CO3, 2M |
| 9 | Write applicability of an adapter.When to use the Adapter pattern. | L1, CO3, 2M |
| 10 | List drawbacks of bridge pattern? | L1, CO3, 2M |

|  |  |  |
| --- | --- | --- |
| **S.No** | **Descriptive Questions (Long)** | **[BT Level] [CO][**  **Marks]** |
| 1 | Explain the Motivation Structure,Intent and Participants of of Adapter pattern? | L2, CO3, 12M |
| 2 | Explain the participants,Intent & Sample Code of Bridge design patterns? | L2, CO3, 12M |
| 3 | Explain the Structure ,Collaboration and Sample Code of Composite pattern ?. | L2, CO3, 12M |
| 4 | Explain The Consequences ,Intent and participants of Decorator design pattern ?. | L3, CO3, 12M |
| 5 | Explain the Collaboration,Sample Code and Consequences of Façade patterns ? | L2, CO3, 12M |
| 6 | Explain the Intent,Participants and Sample Code of Flyweight pattern ? | L2, CO3, 12M |
| 7 | Explain the Motivation Structure,Consequences and Intent of Proxy pattern ? | L3, CO3, 12M |
| 8 | What are structural patterns? Discuss Motivational Structure and Intent of Structural Patterns ? | L3, CO3, 12M |

**Unit-4**

|  |  |  |
| --- | --- | --- |
| **S.No** | **2 Marks Questions (Short)** | **[BT**  **Level][CO][Marks]** |
| 1 | List the implementations of iterator pattern. | L1, CO4, 2M |
| 2 | What is Mediator pattern? | L1, CO4, 2M |
| 3 | What is Iterator pattern? | L1, CO4, 2M |
| 4 | Define Interpreter pattern? | L1, CO4, 2M |
| 5 | What is Command pattern? | L1, CO4, 2M |
| 6 | What is Chain of Responsibility pattern? | L1, CO4, 2M |
| 7 | What is Chain of Responsibility pattern? | L1, CO4, 2M |
| 8 | What is Observer pattern? | L1, CO4, 2M |
| 9 | What is behavioral pattern? | L1, CO4, 2M |
| 10 | How to uses of design patterns? | L1, CO4, 2M |

|  |  |  |
| --- | --- | --- |
| **S.No** | **Descriptive Questions (Long)** | **[BT Level] [CO][**  **Marks]** |
| 1 | Describe the Consequences,Collaboration and Sample Code of Chain of Responsibility pattern | L2, CO4, 12M |
| 2 | Ilustrate the Intent ,Applicability and Participants of Command design pattern ?. | L3, CO4, 12M |
| 3 | Explain the Collaboration ,Participants and Applicability of Interpreter pattern ?. | L2, CO4, 12M |
| 4 | Write a Short Note on Motivation Structure, Intent and sample Code of Iterator pattern? | L2, CO4, 12M |
| 5 | Explain the Applicability,Participants and Sample Code of Mediator design pattern ?. | L4, CO4, 12M |
| 6 | Illustrate The Participants,Collaboration,Applicability of Memento design pattern ? | L3, CO4, 12M |
| 7 | Explain the Consequences,Collaboration,sample Code of Observer pattern ?. | L2, CO4, 12M |
| 8 | Describe the motivation Structure ,Applicability and Intent of Command Iterator Patterns? | L2, CO4, 12M |
| 9 | Describe the motivation Structure,Intent and Sample Code of Command, Mediator patterns. | L2, CO4, 12M |

**Unit-5**

|  |  |  |
| --- | --- | --- |
| **S.No** | **2 Marks Questions (Short)** | **[BT**  **Level][CO][Marks]** |
| 1 | What is the intent of the Strategy pattern? | L1, CO5, 2M |
| 2 | What are the consequences of the Strategy pattern? | L1, CO5, 2M |
| 3 | Define document structure? | L1, CO5, 2M |
| 4 | Define formatting? And what are problems and constraints? | L1, CO5, 2M |
| 5 | Embellishing the User Interface? | L1, CO5, 2M |
| 6 | Supporting Multiple Look-And-Feel Standards | L1, CO5, 2M |
| 7 | Spell Check and Hyphenation? | L1, CO5, 2M |
| 8 | Write short note on collaboration of strategy pattern? | L1, CO5, 2M |
| 9 | What is the difference between the Strategy pattern and the Template Method pattern? | L1, CO5, 2M |
| 10 | What is the Intent of template method | L1, CO5, 2M |

|  |  |  |
| --- | --- | --- |
| **S.No** | **Descriptive Questions (Long)** | **[BT Level] [CO][**  **Marks]** |
| 1 | Explain the Motivation,Participants and Sample Code of State pattern ? | L2, CO5, 12M |
| 2 | Illustrate the consequences,Structure and applicability of Strategy design pattern? | L2, CO5, 12M |
| 3 | Describe the Intent ,Collaboration and Intent of Template Method pattern? | L3, CO5, 12M |
| 4 | Explain the Structure, participants,Sample Code of Visitor pattern ?. | L2, CO5, 12M |
| 5 | What to Expect from Design Patterns? &Explain With Its Participants Sample Code and its Consequences? | L2, CO5, 12M |
| 6 | Briefly Explain the History,Applicability and Intent of design patterns ?. | L3, CO5, 12M |
| 7 | Write a Short Note on Participants ,Intent and Collaboration of Pattern Community An Invitation ? | L2, CO6, 12M |
| 8 | Explain The Intent,Consequences,Structure of Parting Thought ? | L2, CO6, 12M |

**Signature of the Staff :**

**Signature of Department Academic Committee Member 1:**

**Signature of Department Academic Committee Member 2:**

**Signature of Department Academic Committee Member 3:**