SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
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QUESTION BANK (DESCRIPTIVE)

Subject with Code: Design patterns (19MC9146)   **Course & Branch**: MCA

Regulation: R19   **Year & Sem. :** III Year & I Sem

UNIT –I
Introduction about Design pattern

1	Discuss the MVC architecture in small talk	[L2][CO1]	[12M]
2	List the different sections of design patterns. Explain about them.	[L1][CO1]	[12M]
3	State and explain the classification of design patterns	[L1,L2][CO1]	[12M]
4	What is design pattern? Describe in detail about the design pattern.	[L1,L2][CO1]	[12M]
5	List the catalog of design patterns.	[L1][CO1]	[12M]
6	What is Design pattern? How it support to develop the applications?	[L1,L2][CO1]	[12M]
7	Illustrate how a design pattern is selected for implementation.	[L2][[CO1]	[12M]
8	Discuss the how design pattern solve design problems.	[L1,L2][CO1]	[12M]
9	Explain in detail about use and organizing the Design pattern.	[L1][CO1]	[12M]
10	Explain about selection and usage of design trends.	[L3][CO2]	[12M]

UNIT –II

A Case Study

1	a) Explain the various components present in the document structure.	[L2][CO1]	[06M]
	b) What is meant by intersection of functionality and union of functionality? Explain.	[L1,L2][CO1]	[06M]
2	a) Explain the supporting Multiple Window Systems.	[L2][CO1]	[06M]
	b) Explain the Embellishing the user interface.	[L2][CO1]	[06M]
3	a) Explain the various problems associated with Lexi's design.	[L2][CO1]	[10M]
	b) Describe the monoglyph in detail.	[L2][CO1]	[06M]
4	What is Lexi? List and explain the various problems that are associated with it. Describe about the Hyphenation.	[L1,L2][CO1]	[12M]
5	a) What is a design problem? Explain document structure.	[L1,L2][CO1]	[06M]
	b) Explain supporting and multiple look-and-feel standards.	[L2][CO1]	[06M]
6	What are considered to Design the application?		
	i) User Operations & Spelling Checking	[L1][CO2]	[06M]
	ii) Hyphenation.	[L1][CO2]	[06M]
7	Consider any application of Case study? How to support the Document editor design patterns?	[L1,L2][CO2]	[12M]
8	Explain details about the Designing a Document editor.	[L2][CO1]	[12M]
9	Explain details about the Design Problem in design pattern.	[L2][CO2]	[12M]
10	Describe details about the Glyph's Class.	[L1][CO1]	[12M]

UNIT –III
Creational Design Pattern

1	Explain details about the prototype design pattern	[L2][CO1]	[12M]
2	Explain abstract factory design pattern.	[L2][CO1]	[12M]
3	a) List and explain the implementation issues of factory method.	[L1,L2][CO2]	[06M]
	b) Give brief description about the singleton creational pattern.	[L1][CO1]	[06M]
4	a) Explain the role of creational patterns in design of a pattern.	[L2][CO1]	[06M]
	b) Describe details about the prototype design patterns.	[L2][CO1]	[06M]
5	a) Explain creational patterns for abstract factory.	[L2][CO1]	[06M]
	b) Discuss in detail singleton creational pattern? How to design an new application?	[L1,L2][CO3]	[06M]
6	Describe the Builder Design pattern?	[L2][CO1]	[12M]
7	Explain in details about the Consequence & Collaboration of Factory Method with demonstration an example.	[L1,L2][CO3]	[12M]
8	Describe details about the Structure & Applicability of Prototype design pattern.	[L2][CO2]	[12M]
9	Explain details about the Motivation, Structure & Implementation of Singleton Design pattern.	[L2][CO3]	[12M]
10	What is Builder Design pattern? Explain in detail motivation & structure of Builder Design Pattern with an example application of design model.	[L1,L2][CO4]	[12M]

UNIT –IV
Structural Design Patterns

1	a) In what way structural pattern differs from creational pattern? Explain in detail.	[L1,L2][CO1]	[06M]
	b) Explain in detail composite design pattern. Consider an application to draw design architecture.	[L2,L3][CO4]	[06M]
2	a) Mention the uses and related patterns of bridge design pattern.	[L3][CO3]	[06M]
	b) What is a bridge pattern? Explain the functions of each bridge design pattern.	[L1,L2][CO2]	[06M]
3	a) What is the motivation and design a structure of application using adapter pattern? Explain it in detail.	[L4][CO4]	[06M]
	b) Explain the applicability and structure of a bridge design pattern.	[L2][CO1]	[06M]
4	a) Why we are using the wrapper patterns? Draw and explain the structure of it.	[L2,L3][CO4]	[06M]
	b) List and explain the problems that are solved by the bridge pattern.	[L2][CO3]	[06M]
5	What is a structural pattern? Explain composite design patterns.	[L2][CO1]	[12M]
6	a) What is the motivation for the flyweight pattern? Explain in detail with application structure diagram.	[L2][CO4]	[06M]
	b) Mention the consequences and implementation issues of the façade design pattern.	[L2][CO2]	[06M]
7	a) What is a Proxy design pattern? Explain in detail.	[L2][CO1]	[06M]
	b) Explain in detail Flyweight design pattern.	[L2][CO1]	[06M]
8	a) Draw and explain the structure and object diagram for flyweight pattern.	[L1,L2][CO3]	[06M]
	b) Describe briefly about the implementation issues of a proxy pattern.	[L2][CO2]	[06M]
9	a) Discuss about the consequences and implementation issues of a proxy pattern.	[L1, L2][CO2]	[06M]
	b) Write short notes on decorator pattern? Explain with application structure of decorator design pattern.	[L1,L2][CO4]	[06M]
10	Describe in detail of Intent, motivation, structure and sample code of Decorator Design pattern? Explain with example?	[L1, L2][CO4]	[12M]

UNIT –V

Behavioral Design Patterns

1	a) What is an Iterator design pattern? Consider any application to implement design architecture of Iterator design pattern.	[L2,L3][CO4]	[06M]
	b) Explain behavioral patterns for chain of responsibility pattern.	[L2][CO1]	[06M]
2	a) Describe in detail about the motivation, structure, collaboration and implementation of chain of responsibility.	[L1,L2][CO3]	[06M]
	b) Explain the collaborations of a command pattern.	[L2][CO1]	[06M]
3	Explain in detail of command design pattern with example architecture.	[L3][CO4]	[12M]
4	Explain the role of memento pattern in design of a particular pattern.	[L3][CO3]	[12M]
5	a) Explain in detail motivation, structure and implementation of memento design pattern with example architecture.	[L3][CO4]	[06M]
	b) Consider an Observer design pattern to draw structure of application architecture.	[L4][CO4]	[06M]
6	a) Discuss in detail about the implementation issues of an observer pattern.	[L2][CO2]	[06M]
	b) Draw and explain the interaction diagram for memento pattern.	[L2, L3][CO4]	[06M]
7	Explain in detail memento design pattern.	[L2][CO1]	[12M]
8	a) Objects for state & Benefits of strategy design pattern.	[L4][CO1]	[06M]
	b) Explain in detail of applicability, structure and sample code of template method with example architecture.	[L4][CO4]	[06M]
9	Explain in detail about the visitor Design pattern.	[L4][CO1]	[12M]
10	a) Consider any application structure architecture to implement of template method design pattern.	[L4][CO4]	[06M]
	b) What is a strategy? Explain in detail of strategy pattern.	[L2][CO1]	[06M]

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