

Reg.No. \_\_\_\_\_



**Karunya UNIVERSITY**

(Karunya Institute of Technology & Sciences)  
(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

**Code : 14CS2056**  
**Sub. Name : Design Patterns**

**Semester : 2016-17 ODD**  
**Duration : 3hrs**  
**Max. marks : 100**

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.	a.	_____ is a handle used to describe a design problem.	CO1	1
	b.	Expand MVC	CO1	1
	c.	What is a design pattern?	CO1,CO2	2
	d.	Give the catalogue of design pattern.	CO2	2
	e.	Consider the following scenario, you are working as TL in a software company, you need to describe a new design pattern which is going to implement in the project to your team member. How will you describe design pattern?.	CO1,CO2	14
(OR)				
2.	a.	_____ is abstract class for all objects that can appear in document structure.	CO1	1
	b.	A common way to represent hierarchically structured information is through a technique called_____	CO1	1
	c.	How will you classify the design pattern space based on purpose and scope?	CO2	2
	d.	What are the essential elements of design pattern?	CO1,CO2	2
	e.	Assuming that you are working as a software developer in an organization and you are supposed to select a design pattern for the project, Explain the steps to select a design pattern and how to use it	CO1,CO2	14
3.	a.	_____ class for object that can encapsulate a formatting algorithm.	CO1	1
	b.	_____ Factory offers the interface for creating a family of related objects, without explicitly specifying their classes.	CO2	1
	c.	Draw the design pattern relationships.	CO2	2
	d.	Define glyphs	CO2	2
	e.	Explain the case study of designing a document editor.	CO1,CO2	14
(OR)				
4.	a.	_____ provide an interface for creating families of related or dependent object.	CO1	1
	b.	What is the other name of Adapter design pattern?	CO1	1
	c.	Draw the interaction diagram of Builder Design Pattern.	CO2	2
	d.	How will you graphically represent prototype design pattern?	CO2	2
	e.	What is creational pattern? Write in detail about abstract factory.	CO1,CO2	14
5.	a.	Draw the structure of singleton Pattern.	CO2	1
	b.	_____ is also known as Virtual Constructor	CO1	1
	c.	Mention the participants of factory method and explain the functions of each.	CO2	2
	d.	State the applicability of Singleton pattern.	CO2	2
	e.	Assuming that you are working as a software developer in an organization, while developing an application you are facing the problem for creating the object at run time i.e. dynamic loading. How will you solve the problem by using Creational design pattern?	CO1,CO2	14
(OR)				

6.	a.	_____ design pattern is used to encapsulate a request as an object	CO1	1
	b.	Write one advantage of structural pattern.	CO1	1
	c.	How will you graphically represent Proxy design pattern?	CO1	2
	d.	State the applicability of Flyweight pattern.	CO2	2
	e.	Describe Bridge pattern with respect to intent, motivation, applicability, structure, collaborations and implementation.	CO1,CO2	14
7.	a.	_____ are concerned with algorithms and the assignment of responsibilities between objects	CO1	1
	b.	What is the other name of Iterator design pattern?	CO1	1
	c.	Mention the participants of Decorator and explain the functions of each.	CO2,CO1	2
	d.	Mention participants of visitor pattern	CO2,CO1	2
	e.	Give the structure and participants of following design pattern. i)Decorator ii)Composite iii)Flyweight	CO1,CO2	14
(OR)				
8.	a.	_____ is also known as wrapper.	CO2	1
	b.	_____ defines the domain specific interface that client uses.	CO1	1
	c.	Draw the interaction diagram of Command Design Pattern	CO2	2
	d.	State the applicability of command pattern..	CO2	2
	e.	What is Behavioral design pattern? Describe strategy pattern with respect to intent, motivation, applicability, collaborations and implementation.	CO1,CO2	14
		<b><u>Compulsory:</u></b>		
9.	a.	_____ is also known as transaction.	CO1	1
	b.	Iterator design pattern provide a way to access the element of an _____ object sequentially	CO2	1
	c.	What are the different types of behavioral Design patterns?	CO1,CO2	2
	d.	Give the consequences of Interpreter design pattern.	CO1,CO2	2
	e.	Explain the structure diagram of various behavioral design patterns.	CO1,CO2	14

ALL THE BEST