P P SAVANI UNIVERSITY

Second Semester of B. Tech. Examination

November 2022

SEIT1030 Object Oriented Programming with Java

29.11.2022, Tuesday **Time: 1:00 p.m. To 3:30 p.m.** **Maximum Marks: 60**

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION – I

Q - 1	Answer the following: (Any Five)	**[05]**	**CO**	**BTL**
(i)	Define OOP?		**1**	**1**
(ii)	Distinguish between procedural language and OOPs?		**1**	**4**
(iii)	Define enumerated types?		**3**	**1**
(iv)	What is Byte code?		**1**	**2**
(v)	Write full form of JDK and JRE.		**1**	**2**
(vi)	What is JVM? Why Java is called the platform independent programming language?		**1**	**2**
Q - 2 (a)	Explain briefly about the features (buzzwords) of Java.	**[05]**	**1,2,3**	**2**
Q - 2 (b)	Write a sample java code to explain the program structure (Document section, Package statements, Import statements, class definition, Main method class).	**[05]**	**1,2,3**	**2**
	OR			
Q - 2 (a)	Explain each of the primitive data types present in java? Discuss in detail.	**[05]**	**2,3**	**2**
Q - 2 (b)	Define constructors. Explain the different types of constructors in java.	**[05]**	**2,3**	**2**
Q - 3 (a)	What is the use of the operators in java? Explain with an example	**[05]**	**2,3**	**1**
Q - 3 (b)	Define overloading. Discuss about the method overloading and constructor overloading with an example.	**[05]**	**2,3**	**2,3**
	OR			
Q - 3 (a)	What is the purpose of garbage collection in Java, and when is it used? What does System.gc()? Also explain when finalize () is called and what is the purpose of finalization?	**[05]**	**3**	**2,3**
Q - 3 (b)	What do you understand by inheritance? Explain each type of inheritance with the help of diagram and programmatically explain with suitable example any one of them.	**[05]**	**3**	**2,3**

Q - 4	Attempt any one of the following:	[05]		
(i)	Discuss in detail about creating and importing packages with an examples.		3	2
(ii)	Develop a Java Program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method print Area () that prints the area of the given shape.		3	3

SECTION – II

Q - 1	Answer the following: (Any five)	[05]		
(i)	Define Exception?		1,3	1
(ii)	What are different thread priorities?		1,3	1
(iii)	Define character stream?		1,3	2
(iv)	Distinguish between String and String Buffer Class.		1,2,3	2
(v)	Distinguish between throw and throws keyword.		1,2,3	2
(vi)	How many ways can thread be Created?		1,3	3
Q - 2 (a)	What is Array? Explain different types of array and also discuss its advantages.	[05]	1,2,3	2
Q - 2 (b)	What is java Exception? Explain following keywords used in exception handling (a) try, (b) catch and (c) finally. Provide one example that demonstrates the use of these keywords.	[05]	1,3	2
	OR			
Q - 2 (a)	Define a exception called "NotEqualException" that is thrown when a float value is not equal to 3.14. Write a java program that uses the above user defined exception.	[05]	1,2,3	3
Q - 2 (b)	Explain briefly about String class and discuss various methods in String class with an example.	[05]	1,2,3	2
Q - 3 (a)	What is a thread? Explain the states of a thread with an example.	[05]	1,3	2
Q - 3 (b)	Define byte stream and character stream. Explain constructors and methods of File class in Java.	[05]	1,3	2
	OR			
Q - 3 (a)	What is Applet? Write in detail about life cycle of an applet.	[05]	1,3	2
Q - 3 (b)	Compare and Contrast differences between applets and applications	[05]	1,3	4
Q - 4	Attempt any one of the following:	[05]		
(i)	Write a java applet program to display "Welcome to Applet".		1,2,3	3
(ii)	Give the attributes of applet tag. Explain <param> tag with suitable example.		1,2	2

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CO : Course Outcome Number BTL : Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create