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Name:	\$
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Inviailator's Signature :	

CS/B.Tech/IT (NEW)/SEM-4/IT-401/2013

2013 **OBJECT ORIENTED PROGRAMMING AND UML**

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable.

GROUP - A (Multiple Choice Type Questions)

				<i>J</i> 1	,		
1.	Choose the correct alternatives for the following:						
						$10 \times 1 = 10$	
	i)	int	i = 2;				
System.out.println ("welcome" + 1 +					1 + 2);		
	The Output is :						
		a)	welcome3	b)	welcome12		
		c)	compiler error	d)	none of thes	e.	

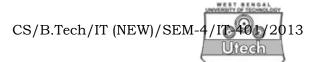
Which of the following is known as short-circuit and ii) operator?

- && & a) b)
- % None of these. d)
- A constructor can be inherited using the keyword
 - Final Static a)
 - None of these. c) Super d)

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				Lean /			
iv)	To inherit an interface from a class, we use the keyword						
	a)	extends	b)	implements			
	c)	both (a) & (b)	d)	none of these.			
v)	In j thre	"	ethod	can be invoked for a			
	a)	once	b)	twice			
	c)	compiler error	d)	not at all.			
vi)	Consider the following statements:						
	int a[] = new int [3];						
	a[3] = 7;						
	System.out.println(a[3]);						
	The output is						
	a)	3	b)	7			
	c)	Compiler error	d)	Run time error.			
vii)	Dynamic method dispatcher is used for						
	a) resolving method overriding						
	b)	resolving multilevel inh	nerita	nce			
	c)	c) resolving multiple inheritance anomally					
	d)	none of these.					
viii)	How many default constructors can a class have, when						
	it has constructor?						
	a)	1	b)	0			
	c)	2	d)	Any number.			
ix)	String s = "WBUT";						
	System.out.println(s.char At(2));						
	The output is						
	a)	U	b)	Exception occurs			
	c)	2	d)	B.			



- x) What is the return type of read () method of Input-Stream class?
 - a) String

b) Void

c) Float

d) None of these.

GROUP - B

(Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. What is byte code? What does the JVM do? Why is Java called platform independent language? 1 + 2 + 2
- 3. a) Explain interface with example.
 - b) What do you mean by garbage collection in Java?
- 4. What is the base class of Error and Exception? Differentiate between throw and throws. 1 + 4
- 5. Explain different access specifiers in Java.

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- 6. Differentiate between the following:
 - a) Method overloading and method overriding
 - b) Object and object reference.

 $2\frac{1}{2} + 2\frac{1}{2}$

GROUP - C

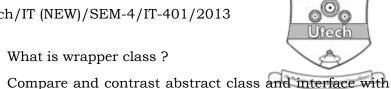
(Long Answer Type Questions)

Answer any three of the following.

 $3 \times 15 = 45$

- 7. a) Distinguish between Data Encapsulation and Data Abstraction.
 - b) Explain "public static void main (String [] args)" in java.
 - c) Why do we need constructor? Write a program to illustrate the use of constructor in java. 3 + 3 + 2 + 7

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- c) Discuss different types of inheritance with example.
- How does String class differ from String Buffer. Write a d) program to reverse a string using String class.

$$2 + 3 + 4 + (2 + 4)$$

9. What is an Exception? a)

example.

8.

a)

b)

- Explain the differences between Error and Exception. b)
- What is the use of "finally" block? c)
- Define an exception called "NO Match Exception" that is d) thrown when a string is not equal to "India". Write a 2 + 3 + 3 + 7program that uses the exception.
- What is Thread? 10. a)
 - How Thread can be implemented in Java. b)
 - Describe the life cycle of Thread. c)
 - Write a program describe Thread d) to inter communication. 1 + 3 + 4 + 7
- 11. Write Short notes on any three of the following: 3×5
 - a) AWT
 - b) **Applet**
 - c) Inner class
 - Activity diagram d)
 - e) Synchronisation.