YSe	eat No	Enrolment	
		GUJARAT TECHNOLOGICAL UNIVERSITY	
a 1	• •	M. E SEMESTER – II • EXAMINATION – WINTER • 2013	
	•	code: 1720109 Date: 04-01-2014	
	_	Name: Object Orinted Programming	
Tir	ne: 1	0.30 am – 01.00 pm Total Marks: 70	
Ins	struc	tions:	
	1.	Attempt all questions.	
		Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
Q.1	(a)	Answer the following questions:	0
		(i) Difference in Constructor and other methods	
		(ii) Difference between the methods sleep() and wait()	
		(iii) Purpose of "final" keyword in front of a variable? A method? A class?	
		(iv) Difference in abstract and concrete class	
		(v) Thread life cycle	
	(b)	Explain the following:	0
		(i) Can you call one constructor from another if a class has multiple	
		constructors?	
		(ii) Casting and promotion	
		(iii)Difference in Applet and Application	
		(iii) Applet life cycle	
Q.2	(a)	(i) Select the valid assignments	0
		1.int $i = (int)16.2d;$	
		2. byte $b = (byte)(long)16.2;$	
		3. float $f = 16.2$;	
		4. byte $b = (int)16.2$;	
		5. byte $b = 128$;	
		(ii) Is this legal ? (No/ Yes)	
		class ExceptionA extends Exception {}	
		class ExceptionB extends ExceptionA {}	
		class A	
		{	
		void thrower() throws ExceptionA{	
		throw new ExceptionA();	
		}	
		}	
		public class B extends A{	
		void thrower() throws ExceptionB{	
		throw new ExceptionB();	
		}	
	(b)	What is the difference between the Reader/Writer class hierarchy and the	0
	(0)	InputStream/OutputStream class hierarchy?	U
		OR	
	(b)	Explain the functioning of Input file stream and Output file stream for text	0
		files.	

Q.3	(a)	Explain the need of Interfaces. What are various types of interfaces in Java,	07
		brief about them. How a new interface is created?	
	(b)	Design a class Employee having following members	07
		Member variables	
		Idno, Name, Experience, BasicSalary	
		Member functions	
		Default constructor	
		Parameterized constructor	
		Input()	
		Display()	
		Double Cal_netSalary(): BasicSalary+DA(=10% of	
		BasicSalary)+HRA(=5% of BasicSalary)	
		Write Main_Emp class having main() function to enter details of N employees. Display information of employee who gets highest salary. OR	
Q.3	(a)	Explain the two ways to define the threads?	07
V. 2	(b)	Write an applet to find out the factorial of a number. The input should be accepted through text box and output should be displayed through text box.	07
Q.4	(a)	Compare and contrast procedure oriented and object oriented programming. Also state the benefits of OOP.	07
	(b)	Describe the producer-consumer problem and its solution. OR	07
Q.4	(a)	What is the race condition and how it can be resolved?	07
	(b)	Explain the use of try, catch, throw and finally with the help of an example.	07
Q.5	(a)	Explain with example the difference in overloading and overriding.	07
Q.C	(b)	Answer the following questions:	07
	` '	1. Describe various object relationships.	
		2. Explain the String class and it's methods.	
		OR	
Q.5	(a)	Explain the syntax of iterative statements available in java.	07
	(b)	Answer the following questions:	07
	\-/	1. How is inheritance related to potential reuse?	
		2. What are different data types available in java?	
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