S.E. (IT) (Sem-III) (CBSGS) (R-2012) Date-28/11/19

Paper / Subject Code: 49806 / OBJECT ORIENTAED PROGRAMMING METHODOLOGY

Q. P. Code : 26235

(3 Hours) **Total Marks : 80**

Note: Q. 1 is **compulsory**.

Attempt any **THREE** questions from **Q. 2 to Q. 6**

Q. 1	**a**	Explain Applet life cycle methods.	**[5]**
	b	Write a program to display Fibonacci series up to first n terms. Take input from command line arguments.	**[5]**
	c	Explain Wrapper class in JAVA.	**[5]**
	d	Explain System.arraycopy() method with example.	**[5]**
Q. 2	**a**	Explain the steps to create package in JAVA to add class and interface with example.	**[10]**
	b	Differentiate between method overloading and overriding. Write a program to override **volume()** method of **Shape** class into its subclasses **Cube** and **Cylinder. Shape** is an abstract class.	**[10]**
Q. 3	**a**	Explain different types of relationships among the entities. Define the relationships among the objects of given sentences: 1) Teacher is an Employee. 2) Teacher teaches OOPM subject to students. 3) John hires a car. 4) Drawer is a part of table.	**[10]**
	b	Explain different ways to create Thread in JAVA. Write a program to display following pattern using threads. $@$@$@$@$@$@$@$@$@	**[10]**
Q. 4	**a**	Explain bitwise operators in JAVA.	**[5]**
	b	Discuss **static** data members and methods in JAVA.	**[5]**
	c	Explain any two methods of **String** class.	**[5]**

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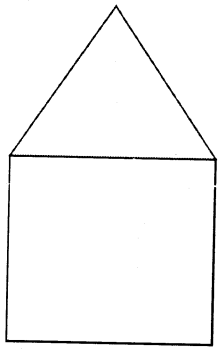
d Write an applet program to display [5]



Q. 5 a Explain exception handling mechanism with the help of **try**, **catch**, **throw**, **throws** and **finally**. [7]

b The manufacturing industry wants to maintain record of its products. If any new product is build then it is added to the list. Also if any product is scraped it can be deleted from the list. Write a program to perform above operations and display list of products. [8]

c Write a program to check whether given string is palindrome or not. [5]

Q. 6 a Explain inheritance and its types in JAVA. [10]

b Write a program to display sum of column elements of a matrix. [10]

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