

Full Marks: 70

2019**MCA****3rd Semester Examination
(Answer All Questions)**

Times: 3 Hrs

1. (a) write a program in java to find all prime number between 1 to 100, using sieve of eratosthenes. [10]
 (b) Distinguish between the following pair: [4]
- i. >> and >>>
 - ii. final and finalize().

OR

- (c) Match the Column A with Column B: [3]

Column A	Column B
\b	non-instantiable
^	bit-wise complement
~	it invokes the constructor
this	refers to the current object.
Super	bit-wise XOR
static	backspace

- (d) Write a java program to find GCD of two integer number using Euclidean algorithm. [5]
 (e) Write a java program to declare a 3x3 matrix and find out summation of each cell of the matrix using for-each loop. [6]

2. (a) What is garbage collection? How finalize() method is related to garbage collection. [4]
 (b) What is Varargs? Can we overload the varargs method? If yes, then Write a java program to demonstrate overloading of varargs method. [10]

OR

- (c) Explain the essence of **static** in java. Write a java program to demonstrate the distinction of static variables and methods. [6+4]
 (d) Distinguish between the following pairs : [4]
- i. equals() and ==
 - ii. BufferedReader and Scanner

3. (a) state the two applications of super keyword. Write a program to demonstrate the same. [6]
 (b) Distinguish between Interface and abstract class? Is an Interface can extend another interface, justify your answer and write a program to demonstrate the same. [8]

OR

- (c) Write short notes: [3x3]
- (i) Annotation.
 - (ii) Enumeration
 - (iii) Autoboxing
- (d) Write a program to illustrate working of values() and valueOf() method enumeration. [5]

4. (a) What is a Thread? Explain different types of threads. Write a program to demonstrate multi threading both by extending Thread Class and by Runnable interface. [14]
- OR**
- (b) What is an Exception? Write a program to handle arithmetic Exception using multiple catch block. [7]
- (c) Write a program to set priority to the threads by implementing Runnable interface. [7]
5. (a) what is AWT ? Design a data receiving form comprises of Name, Address, Pincode with two set of button as Submit and Reset by extending the Applet class as container. [14]

OR

- (b) Write Short Note: [6+4+4]
- (i)Event and Different types of Event Class
 - (ii) Adapter Class
 - (iii) Event Listener