K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Feb| March 2024

B.Tech Program: Information Technology Scheme : II

Examination: SY   Semester: III

Course Code: ITC304 and   Course Name: Java Programming

Date of Exam: 06|03|24   Duration: 2.5 Hours   Max. Marks: 60

Supplementary Examination

Instructions:
(1) All questions are compulsory.
(2) Draw neat diagrams wherever applicable.
(3) Assume suitable data, if necessary.

		Max. Marks	CO	BT level
Q 1	**Solve any six questions out of eight:**	**12**		
i)	Define Class with example.	2	CO1	U
ii)	Differentiate between constructor and method.	2	CO2	AN
iii)	Differentiate between Abstract Class vs Interface.	2	CO3	AN
iv)	Define throw and throws keyword in Exception handling.	2	CO4	U
v)	Describe the Layout Managers in AWT.	2	CO5	U
vi)	Describe the different access specifiers available in java.	2	CO3	U
vii)	Define scene graph in JavaFX.	2	CO6	U
viii)	Define the final class in Java.	2	CO4	U
Q.2	**Solve any four questions out of six.**	**16**		
i)	Summarize the features of Java programming.	4	CO1	U
ii)	What are the differences between Array and ArrayList in java? Give example of each.	4	CO2	A
iii)	What is method overriding?. Demonstrate it using the java program.	4	CO3	A
iv)	Explain Thread Synchronization. Apply it with example.	4	CO4	A
v)	Describe Java Database Connectivity with MySQL. Apply it with example.	4	CO5	A
vi)	Discuss JavaFX control.	4	CO6	U
Q.3	**Solve any two questions out of three.**	**16**		

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i)	Write a program for two threads one displays odd numbers from 1 to 10 and other displays even numbers from 1 to 10, use sleep() method to display number sequentially	8	CO4	A
ii)	Write a Java program to create a simple calculator using java AWT elements. Use a grid layout to arrange buttons for the digits and basic operation +, -, /, *. Add a text felid to display the results.	8	CO5	C
iii)	Write a menu driven program to perform the following operations, after accepting 3 numbers from user. ○ to find largest of three given numbers ○ to find all the roots of quadratic equation	8	CO1	A
Q.4	**Solve any two questions out of three.**	**16**		
i)	Create a class "Amount In Words" within a user defined package to convert the amount into words. (Consider amount not to be more than 100000)	8	CO3	A
ii)	Create program to draw various shapes on Canvas using JavaFX.	8	CO6	C
iii)	Explain following terms with example. a) Method overloading, b) Vector	8	CO2	A

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