

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

**End Semester Exam**

Nov – Dec 2021

(B.Tech) Program: Information Technology

Examination: SY Semester: III

Course Code: 1UITC304 and Course Name: Paradigms and Computer Programming Fundamentals

Duration: 03 Hours

Max. Marks: 60

**Instructions:**

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

| <b>Q 1</b>   | <b>Solve any six questions out of eight:</b>                     | <b>Max. Marks</b> | <b>CO</b> | <b>BT level</b> |
|--------------|--|-------------------|-----------|-----------------|
|              |  | <b>12</b>         |           |                 |
| <b>Ai)</b>   | Describe Imperative paradigm.                                    | 2                 | CO1       | U               |
| <b>ii)</b>   | Write java code to handle exception in array manipulation        | 2                 | CO1       | R               |
| <b>iii)</b>  | What is initialization and finalization in programming language? | 2                 | CO2       | R               |
| <b>iv)</b>   | What is multitasking in concurrent programming ?                 | 2                 | CO3       | R               |
| <b>v)</b>    | Explain purpose of scripting language.                           | 2                 | CO5       | U               |
| <b>vi)</b>   | Write a JavaScript code to check number even or odd              | 2                 | CO6       | U               |
| <b>vii)</b>  | Describe Alert function in JavaScript.                           | 2                 | CO6       | U               |
| <b>viii)</b> | Discuss benefits of declarative language.                        | 2                 | CO4       | U               |
| <b>Q.2</b>   | <b>Solve any FOUR questions out of six.</b>                      | <b>16</b>         |           |                 |
| <b>i)</b>    | Describe the difference between static and dynamic scoping.      | 4                 | CO1       | U               |
| <b>ii)</b>   | Discuss any two features of object oriented programming.         | 4                 | CO2       | U               |
| <b>iii)</b>  | Discuss implementation method of thread.                         | 4                 | CO3       | U               |
| <b>iv)</b>   | Justify role of scripting in web development.                    | 4                 | CO5       | AN              |
| <b>V</b>     | Design calculator using JavaScript .                             | 4                 | CO6       | A               |
| <b>VI</b>    | Explain pure function with the help of example.                  | 4                 | CO4       | U               |
| <b>Q.3</b>   | <b>Solve any Two questions out of three.</b>                     | <b>16</b>         |           |                 |



|             |  |           |             |    |
|-------------|--|-----------|-------------|----|
| <b>I.</b>   | Discuss core language design issues.   | 8         | CO1         | U  |
| <b>II.</b>  | a) Design student registration form which can handle form validation and display record from database.   | 8         | CO6,<br>CO5 | AP |
| <b>III.</b> | Write a Prologue Code for Following statement.<br>fubby is a cat<br>fubby has black spots<br>figaro is a dog<br>figaro has white spots<br>1. list the all the clauses of predicates 'cat'.<br>2. list the all the clauses of predicates 'owns'.<br>3. Mary owns something?<br>4. Who loves what? | 8         | CO4         | AP |
| <b>OR</b>   |  |           |             |    |
| <b>Q.4</b>  | <b>Solve any two questions out of three.</b>   | <b>16</b> |             |    |
| <b>I.</b>   | Explain subroutine call in C programming.  | 8         | CO1         | U  |
| <b>II.</b>  | Explain procedure to access static members in java programming.<br>Discuss its pros and cons   | 8         | CO2         | U  |
| <b>III.</b> | Write a java code to implement synchronization.  | 8         | CO3         | U  |