**18CS701**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **January, 2022** | **Computer Science and Engineering** | | |
| **Seventh Semester** | **Full Stack Development** | | |
| **Time:** Three Hours | | **Maximum :** 50 Marks | |
| *Answer Question No.1 compulsorily.* | | | (1X10 = 10 Marks) |
| *Answer ONE question from each unit.* | | | (4X10=40 Marks) |

**1.** Answer all questions (1X10=10 Marks)

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| a | Define Node.js and where can we use Node.Js? |
| b | Write the purpose of listen()method in Node.Js application. |
| c | What are the parameters of Express middleware callback function? Give syntax. |
| d | Write differences between res.wrtie() and res.send() method in Node.Js. |
| e | What is NoSQL? |
| f | Write the syntax of MongoDB URI to be used in Node.Js. |
| g | Write comparison between TypeScript and JavaScript. |
| h | What are the commands used to create and build an Angular application? |
| i | Name any two properties of @Component decorator and their types. |
| j | Write the difference between <router-outlet> and routerLink in Angular. |

**UNIT – I**

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| 2.a | List Differences between Node.Js and JavaScript. | 4 M |
| 2.b | Explain the steps involved in implementing GET and POST methods in Node.Js web application with example code. | 6 M |

**(OR)**

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| 3.a | Explain Synchronous and Asynchronous File System operations with example codes in Node.js. | 5 M |
| 3.b | What is template engine? Code an Express.Js application using template-engine to display data. | 5 M |

**UNIT – II**

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| 4.a | Define Cookies? How to send and receive cookies in express? Explain with example code. | 5 M |
| 4.b | Explain the steps in coding an Express application that connects to MongoDB database and lists the documents. | 5 M |

**(OR)**

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| 5.a | How to implement session authentication in Node.Js, Explain with code. | 5 M |
| 5.b | List any five collection operations in MongoDB? Explain with code for each. | 5 M |

**UNIT – III**

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| 6.a | Explain different data types in TypeScript. Design a Bank Account application using class and interface in TypeScript. | 5 M |
| 6.b | Draw the Angular Architecture. Explain each building block for implementing Angular application. | 5 M |

**(OR)**

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| 7.a | Define a component. Explain the complete configuration of a component with example. | 5 M |
| 7.b | Explain the Folder structure and the role of each file in an Angular application . | 5 M |

**UNIT – IV**

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| 8.a | List different built-in directives in Angular. Explain different structural directives with code. | 5 M |
| 8.b | What are Angular Services? Why @Injectable() decorator is recommended for implementing Angular Service application, Explain the creation of a service with code. | 5 M |

**(OR)**

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| 9.a | Illustrate the use of EventEmitter for implementing custom events in Angular with code. | 5 M |
| 9.b | Explain how to implement a router with parameters in Angular with code. | 5 M |