

END TERM EXAMINATION

SECOND SEMESTER [MCA] JULY 2023

Paper Code: MCA-114

Subject: Full Stack Development

Time: 3 Hours

Maximum Marks: 75

Note: Attempt five questions in all including question Q.No.1 which is compulsory. Select one question from each unit.

- Q1 Answer all the following questions briefly:- (2.5x10=25)
- Describe the role of Package.JSON in NodeJS.
 - You are required to develop a module in ES6 to return the sum of any two given numbers. Write the code to develop module in ES6.
 - Explain the uses of pipes in angular.
 - Explain the concept of state management in React.
 - Give a brief overview of Express Framework.
 - With code, explain the simplicity of two way data binding in angular application.
 - With example , explain the ways of implementing form validations in Angular.
 - Analyze and brief a real scenario to use NoSQL database over RDBMS.
 - Explain the significance of JSON format.
 - Write and compare the code for a server in NodeJS and ExpressJS.

UNIT-I

- Q2 a) Define React. Highlight the obstacles and React Developer tools in detail. (6.5)
- ✓ b) Discuss ES6 Classes and stateless functional components. (6)
- Q3 a) Elaborate on Constructing Elements with Data with example. (6.5)
- b) Develop a react component using the pure React code. The output must be in form of a table (No DB is required). The table must have the following details: (6)
- Sr.No., Name, Enrollment Number, Programme, Semester

UNIT-II

- Q4 a) Discuss REST API Design. Illustrate Identifier Design with URIs briefly. (6.5)
- b) Develop a module to handle the get, post, put, patch methods from the 5 004 clients. for every type of request the module responds to the client the name of the method in following format: {method: Name of Method} (6)

P.T.O.

MCA-114
P_{1/2}

- Q5 a) Classify React Router and outline the incorporation process in detail. (6.5)
- ✓ b) Propose your understanding of JSON along with its syntax and an appropriate example. (6)

UNIT-III

- Q6 a) Illustrate different types of data binding in angular with pseudo codes of each. (6.5)
- b) Given a student data API. Develop angular UI retrieving data using HTTP to display. (6)
- Q7 a) Compare Synchronous and Asynchronous file system. Justify their application. (6.5)
- ✓ b) Explain templates in Angular. (6)

UNIT-IV

- Q8 a) Differentiate between NoSQL and RDBMS database. Elaborate the use of each. (6.5)
- ✓ b) Illustrate the use of Query objects in MongoDB. (6)
- Q9 a) Imagine a database structure for student management system and write a program for connecting to MongoDB from Node.js for displaying records of students. (6)
- b) With suitable examples, explain sorting and limiting result sets in MongoDB. (6.5)

MCA-114
P2/2