

CMR ENGINEERING COLLEGE: : HYDERABAD

UGC AUTONOMOUS

III-B.TECH-II-Semester End Examinations (Regular) - June- 2025

FULL STACK DEVELOPMENT

(IT)

[Time: 3 Hours]

[Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A**(10 Marks)**

1. a) Name one scripting language used in web development [1M]
- b) What does CSS stand for? [1M]
- c) Name any one data format commonly used in AJAX responses. [1M]
- d) What is a constructor in JavaScript classes? [1M]
- e) What will [1, 2, 3].reduce((a, b) => a + b) return? [1M]
- f) What is the virtual DOM in React? [1M]
- g) What is a Spring Boot application? [1M]
- h) Which component in the MVC architecture handles the logic of the application? [1M]
- i) How does Spring JDBC handle exceptions? [1M]
- j) What does the term "Primary key" mean in a relational database? [1M]

PART-B**(50 Marks)**

- 2.a) What is the difference between git clone, git pull, and git push? [6M]
- b) Write a shell script to check whether a number is even or odd. [4M]

OR

3. Explain any five commonly used UNIX commands along with their purpose and syntax. [10M]
4. What are the uses of JSON in web development? Explain with an example of data exchange between client and server. [10M]

OR

5. Write the steps to make an AJAX GET request using XMLHttpRequest. Explain each step briefly. [10M]
6. Describe the steps to connect a React component with Redux using connect() or hooks like useSelector and useDispatch. [10M]

OR

7. Describe how data is sent from a client to a server using *fetch()* in JavaScript. Write a simple example. [10M]
8. What is the role of the Controller in the MVC architecture? Explain how it interacts with the Model and View. [10M]

OR

9. What is Spring Data JPA, and how is it used to interact with databases in a Spring application? Explain with an example. [10M]
10. Explain the process of handling a database query result and mapping it to a Java object using RowMapper. Provide a simple example. [10M]

OR

11. Explain the Agile principle and methodology and its benefits. How does it differ from the traditional Waterfall model? [10M]
