

Roll No.: _____

Amrita Vishwa Vidyapeetham, Coimbatore Campus

B.Tech Mid-Term Examinations – August 2025

Fifth Semester

Computer Science and Engineering

**Computer Science and Engineering, Computer and Communication Engineering,
Electrical and Electronics Engineering**

23CSE461 Full Stack Frameworks

Set-2

Duration: Two hours

Maximum: 50 Marks

CO	Course Outcomes
CO01	Learn how to develop single page applications (SPAs) efficiently using front-end framework
CO02	Learn to use backend frameworks to develop web and mobile applications robustly.
CO03	Learn to build highly available and scalable internet applications using document databases.
CO04	Design and develop full stack web projects using front-end, back-end and database frameworks.

Answer All Questions

1. Design a Employee Tax calculator using **ReactJS** and perform the following operations as the user enters the value in the text box

[20 Marks] [CO1] [BTL 4]

- a) Write the code routine for calculating the salary given the DA, HRA, Special_allowance given the Basic_Pay . Display the Total Salary as sum of BasicPay,DA,HRA,Special Allowance

**DA is 30 percentage of BasicPay, HRA is 10 percent of Basic Pay,
Special_allowance is 5 percent of Basic Pay**

[10 Marks]

- b) Have a button named **Check_grade** . On clicking the same it should display the Employee grade.

[5 Marks]

- a. If **Total_salary** between 10000 to 20000 then the grade is “A”
 - b. If **Total_salary** between 20001 to 30000 then the grade is “B”
 - c. If **Total_salary** between 30001 to 40000 then the grade is “C”
 - d. If **Total_salary** is greater than 40000 the category is “EXC”
- c) Have a button named **check_bonus** and **display bonus** based on following conditions.
- a. If grade is A Bonus is 15 percent of Basic_Pay
 - b. If grade is B Bonus is 12 percent of Basic_Pay
 - c. If grade is C Bonus is 6 percent of Basic_Pay
 - d. If grade is EX Bonus is 5 percent of Basic_Pay

[5 Marks]

Question No.	Marks	Evaluation Rubrics
a	10	Total Salary calculation – 10 0/3/5/10 0 -Not done 3 -The code has been written for some operations 5 -The code has been written for all operations and not showing output 10 -The code is working for all operations
b	5	CheckGrade -5 0/2/5 0-Not done 2- The code has been written as per the logic not showing output 4-The code is working and showing the correct grade
c	5	Check_Bonus-5 0/2/5 0-Not done 2- The code has been written as per the logic not showing output 5-The code is working and displaying the bonus

2.

[10 Marks] [CO2] [BTL 3]

a. Create a Database for storing Employee Information ----- 2 Marks

b. --- 2 Marks

(i) create a MongoDB document with Eno:B101, Name:Ramesh,

Date of joining:'10-aug-2025', experience:3

(ii) create a MongoDB document with Eno:B101_1, Name:Ramesh kumar,

Date of joining:'11-aug-2025', experience:13

(iii)) create a MongoDB document with Eno:B102, Name:Ravi,

Date of joining:'1-aug-2025', experience:3

c. search for the document whose Eno is B101 ----- 2 Marks

d. Update the document whose Eno is B101_1 and date as '11-Aug-2025' as

Eno:B101_1, Name : 'Rahul' , Date of joining: '08-Sep-2025', experience: 12 ----- 2 Marks

e. Remove the document whose Eno is B101 ----- 2 Marks

Part B

3. With an example explain the syntax and working of class and function components.

[5 Marks] [CO1] [BTL 2]

4.

[5 Marks] [CO1] [BTL 3]

Complete the code below with the missing sections.

```
import React from 'react';
```

```
class FormattedSalary extends React.Component {
```

```
....
```

```
  convert(sal) {
```

```
    return parseFloat(amount).toFixed(1)
```

```
  }
```

```

render() {
  ....
  );
}
}

export default ....;

```

5. With an example explain how the list can be used to populate the students marks for five students. [5 Marks] [CO1] [BTL 2]

6. With a example explain how routing can be done in ReactJS [5 Marks] [CO1] [BTL 2]

CO	Marks	BTL	Marks
CO01	40	BTL 1	
CO02	10	BTL 2	15
CO03		BTL 3	15
CO04		BTL 4	20
CO05		BTL 5	
CO06		BTL 6	