

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**Department of Computer Science and Engineering (CSE)**

**MID SEMESTER EXAMINATION****WINTER SEMESTER, 2020-2021****DURATION: 1 Hour 30 Minutes****FULL MARKS: 75****SWE 4537: Server Programming****Programmable calculators are not allowed.**

Figures in the right margin indicate marks. You need to answer all three questions.

Write Student ID and Name top of the first page and write studentID and page no in every page of the answer script.

Submission pdf should be named as Full Student ID&lt;space&gt;Course Code&lt;dot&gt;pdf

1. a) Describe the differences between different types of Browser Storage. **9**  
(CO1,PO1)
  - b) Explain the working mechanism of Web Applications with necessary diagrams. **6+4**  
(CO1,PO1)  
Describe HTTP Request and Response format.
  - c) Why do we know HTTP as a stateless protocol? **3+3**  
(CO1,PO1)  
<http://www.blissfair.com:77?userID=123&theme=light%20grey> – Explain the different parts of this URL.
2. a) What is OAuth V2.0? Explain its working procedure with the help of necessary diagrams. **7**  
(CO2,PO1,PO5)
  - b) Define the structure of JWT. Explain the working procedure of JSON Web Token based authentication. **7**  
(CO2,PO1,PO5)
  - c) What are the differences between SOAP and RESTful Web Services? **5**  
(CO2,PO1,PO5)
  - d) Write short description about the following terms- **2+2+2**  
(CO2,PO1,PO5)
    - I. CSRF
    - II. XSS
    - III. Middleware
3. In our society, the number of people who read/write/is involved with literature is decreasing day by day. For these people, you want to create a separate platform where they can share their thoughts on various topics related to literature. It might be a review of a book, thoughts on the current condition of Bengali literature, discussion on the lifestyle of a renowned writer, etc. So, you want to create a blog for book readers or writers.  
 It will use Express JS for Backend. Users will be authenticated with their email and password. In the homepage, users will be able to see posts from other users. And there will be a section to create a new post on the homepage. For every post, users can like/comment on the post. Commenting on the post will take the user to a separate page where all the comments regarding that post will be shown and there'll be a section to post new comments. There'll be a profile page where information regarding the current user will be shown.
  - a) Define the routes and controller functions you need to create for the user authentication of this app. You can assume that necessary view files such as 'login.html', 'register.html', 'home.html', etc. are already created. **6+6**  
(CO3,PO1,PO2, PO3,PO5,PO6)

- b) Describe the differences between synchronous and asynchronous functions with example.
- c) Define a middleware with the corresponding route for validating form response during user registration request. It will check if password is at least 8 characters or not. If the validation fails user will be redirected to Registration route. Otherwise, user account will be created (using a dummy registerUser function) and user will be redirected to Home route.

**5**  
(CO3,PO1,PO2,  
PO3,PO5,PO6)

**8**  
(CO3,PO1,PO2,  
PO3,PO5,PO6)