**Tables and Columns**

1. **attendance**
   * attendance\_id (int, primary key)
   * schedule\_id (varchar)
   * student\_id (varchar)
   * date (date)
   * status (enum: 'Present', 'Absent')
2. **batch**
   * batch\_id (varchar, primary key)
   * batch\_name (varchar)
   * start\_year (int)
   * end\_year (int)
   * department\_id (varchar)
3. **class\_schedule**
   * schedule\_id (varchar, primary key)
   * section\_id (varchar)
   * semester\_subject\_id (varchar)
   * teacher\_id (varchar)
   * day\_of\_week (enum)
   * start\_time (time)
   * end\_time (time)
4. **department**
   * department\_id (varchar, primary key)
   * department\_name (varchar)
5. **forum\_messages**
   * message\_id (int, primary key)
   * sender\_id (varchar)
   * receiver\_id (varchar)
   * message\_text (text)
   * timestamp (datetime)
6. **section**
   * section\_id (varchar, primary key)
   * section\_name (varchar)
   * batch\_id (varchar)
7. **semester\_subject**
   * semester\_subject\_id (varchar, primary key)
   * semester (int)
   * subject\_id (varchar)
8. **student\_section\_assignment**
   * assignment\_id (varchar, primary key)
   * student\_id (varchar)
   * section\_id (varchar)
9. **subject**
   * subject\_id (varchar, primary key)
   * subject\_name (varchar)
   * subject\_code (varchar)
10. **teachermaster**
    * teacher\_id (varchar, primary key)
    * department\_id (varchar)
    * joining\_date (date)
11. **teacher\_section\_assignment**
    * assignment\_id (varchar, primary key)
    * teacher\_id (varchar)
    * section\_id (varchar)
12. **usermaster**
    * user\_id (varchar, primary key)
    * name (varchar)
    * email (varchar)
    * password (varchar)
    * phone (varchar)
    * role (enum: 'Admin', 'Teacher', 'Student', 'HOD')

**Relationships and Dependencies**

* attendance is related to class\_schedule (via schedule\_id) and usermaster (via student\_id).
* batch is related to department (via department\_id).
* class\_schedule is related to section, semester\_subject, and usermaster (via teacher\_id).
* forum\_messages is related to usermaster (via sender\_id and receiver\_id).
* section is related to batch (via batch\_id).
* semester\_subject is related to subject (via subject\_id).
* student\_section\_assignment is related to usermaster (via student\_id) and section (via section\_id).
* teachermaster is related to department (via department\_id).
* teacher\_section\_assignment is related to teachermaster (via teacher\_id) and section (via section\_id).