**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Even Semester**

**(2017-18)**

**Class: M.Sc (IT) –Sem II Name of the Teacher: Anu Chawla**

**Subject:** Advanced Database Programming & MySQL **Period : 2nd**

**Paper :** MS-60  **Room No : BCA Lab 3, IT Block**

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| **S. No** | **Date From** | **Date Upto** | | **Topics to be covered** | |
| Week 1 | Jan 08, 2018 | Jan 13, 2018 | | Database Management Systems  : Definition, Characteristics, Advantages of Using DBMS Approach, Classification of DBMSs | |
| Week 2 | Jan 15, 2018 | Jan 20, 2018 | | Data Models, Database Schema and Instance, Three Schema Architecture, Data Independence – Physical and Logical data Independence. | |
| Week 3 | Jan 22, 2018 | Jan 27, 2018 | | Entity- relationship model: Entities, Relationships, representation of entities, attributes, Representation of relationship set. | |
| Week 4 | Jan 29, 2018 | Feb 3, 2018 | | Entity- relationship model: Generalization, aggregation.  MySQL: Introduction; Why MySql; Tools provided with MySQL; MySQL Architectural Terminology; | |
| Week 5 | Feb 5, 2018 | Feb 10, 2018 | | Databases:Creating, Selecting, Dropping and Altering Databases; Tables: Creating, dropping,  Altering, Indexing Tables; Adding new rows, Retrieving Information, | |
| Week 6 | Feb 12, 2018 | Feb 17, 2018 | | Deleting or Updating Existing rows; Obtaining MySQL Metadata; Joins; Subqueries; Views; Multip  le Tables Deletion and Updation;  Foriegn Keys and Referential Integrity; MySQL Data Types; Sequences. | |
| Week 7 | Feb 19, 2018 | Feb 24, 2018 | | Data Warehousing  : Introduction; Features; Data modeling for Data Warehousing; Building Data warehouse; | |
| Week 8 | Feb 26, 2018 | Mar 03 , 2018 | | Comparison between Data Warehouse and DBMS Metadata; Problems and issues in Data Warehouse.  Data Mining : Overview; Goals of Data Mining; | |
| **2nd week March (Mid Semester Exam)** | | | | | |
| Week 9 | March 12, 2018 | | March 17, 2018 | | Techniques: Association rules(Market Basket Algorithm,  Apriori Algorithm); |
| Week 10 | March 19 , 2018 | | March 24, 2018 | | Classification: Decision Tree, Induction Algorithm; Applications of Data Mining. |
| Week 11 | March 26, 2018 | | March 31, 2018 | | Normalization  : Functional Dependency, Full Functional Dependency, Partial Dependency, Transitive  Dependency, Normal Forms– 1NF, 2NF, 3NF, BCNF, Multi-valued Dependency |
| Week 12 | April 02, 2018 | | April 07, 2018 | | Relational Algebra and Relational Calculus  : Relational Algebra: Operations- Union, Intersection,  Difference, Cartesian product, Projection, Selection, Division  and relational algebra queries; |
| Week 13 | April 09, 2018 | | April 14 , 2018 | | Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations. |
| Week 14 | April 16, 2018 | | April 21, 2018 | | Transaction and Concurrency control: Concept of transaction, ACID properties, Serializibility, States of transaction, |
| Week 15 | April 23, 2018 | | April 28, 2018 | | Concurrency control: Locking techniques, Time stamp based protocols, Granularity of data items, Deadlock. |
| Week 16 | April 30, 2018 | | May 05, 2018 | | Revision |