

Govt. Polytechnic, Umri, Kurukshetra
Lesson Plan (DBMS)

Name of the Faculty: Abha Bansal
Discipline: Computer Engg.
Semester: 4th
Subject : DBMS
Lesson Plan Duration: (From 6 March 2023 to 23 June 2023)
Work Load (Lecture/Practical) per week (In hour): Lecture-03, Practical-03

| Week | Theory | | Practical | |
|------|-------------|--|---------------|--|
| | Lecture Day | Topic(including assignment/Test) | Practical Day | Topic |
| 1st | 1ST | Database system: Introduction to database and its purpose | 1st | Exercise on creation and modification of structure of tables |
| | 2nd | Characterstics of database, approach, advantage and disadvantage of database system | 2nd(G2) | Exercise on creation and modification of structure of tables |
| | 3rd | Classification of DBMS users: Actors on the scene- Database Administrators, Database designers, End users – System Analyst and Application Programmers | | |
| 2nd | 4th | Workers behind the scene (DBMS system designers and implementers, tools developers, operator and maintenance personnel | 3rd (G1) | Revision of Exercise on creation and modification of structure of tables |
| | 5th | Data Models, Schemas, instances, Database state, DBMS Architecture: External level, Conceptual level, Internal level, Mappings | 4th (G2) | Revision of Exercise on creation and modification of structure of tables |
| | 6th | Data Independence: Logical data independence and physical data independence | | |
| 3rd | 7th | Database Languages, DBMS interfaces, Classification of DBMS- Centralized, Distributed, Parallel and Object Based | 5th (G1) | Exercise on inserting and deleting values from tables |
| | 8th | Data modeling using E-R Model | 6th(G2) | Exercise on inserting and deleting values from tables |
| | 9th | Data Model Classification: File Based or primitive models, traditional data Models, Semantic Data Models | | |

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| 4th | 10th | Entities and Attributes, Entity Types and Entity Sets, Key Attribute and domain of attributes | 7th (G1) | Revision of exercise on inserting and deleting values from tables |
| | 11th | Relationship among entities , database design with ER model | 8th (G2) | Revision of exercise on inserting and deleting values from tables |
| | 12th | Revision of 1 st , 2 nd and 3 rd unit | | |
| 5th | 13th | Relational model Concepts: Domain, Tuple, Attribute, Cardinality, Relation | 9th (G1) | Exercise on Querying the table using Select Command |
| | 14th | Keys- Primary, Secondary, Foreign, Alternate. Relational Constraints and Relational Database schemes | 10th (G2) | Exercise on Querying the table using Select Command |
| | 15TH | Domain Constraints, key Constraints and Constraints on Null | | |
| 6th | 16th | Relational Databases and Relational Database Schemes | 11th(G1) | Revision of Exercise on Querying the table using Select Command |
| | 17th | Entity Integrity, Referential Integrity and Foreign Key | 12 th (G2) | Revision of Exercise on Querying the table using Select Command |
| | 18th | Comparison between ER Model and Relational Model | | |
| 7th | 19th | Trivial and Non Trivial Dependencies | 13th(G1) | Exercise on using various types of joins |
| | 20th | Non Loss Decomposition and Functional Dependencies | 14th(G2) | Exercise on using various types of joins |
| | 21Th | First and 2 nd normal forms | | |
| 8th | 22th | Third normal form, BCNF, Denormalization | 15th(G1) | Revision of Exercise on using various types of joins |
| | 23th | Revision of unit 4 | 16th(G2) | Revision of Exercise on using various types of joins |
| | 24TH | Revision of unit 5 | | |
| 9th | 25th | Creating and using indexes, Creating and using views | 17th(G1) | Exercise on using functions provided by database package |
| | 26th | Database security, Process controls | 18th(G2) | Exercise on using functions provided by database package |
| | 27TH | Database protection, grant and Revoke | | |

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| 10th | 28th | DDL: Creating tables, Creating a table with data from another table | 19th(G1) | Revision of Exercise on using functions provided by database package |
| | 29th | Inserting values into a table, Updating columns of a table | 20th(G2) | Revision of Exercise on using functions provided by database package |
| | 30TH | Deleting Rows, Dropping a table | | |
| 11th | 31st | DML, Database Security and privileges, Grant and Revoke command | 21st(G1) | Exercise on Grant, Revoke, Commit and Rollback |
| | 32th | Maintaining Database objects, commit and Rollback | 22nd(G2) | Exercise on Grant, Revoke, Commit and Rollback |
| | 33RD | Various types of select commands | | |
| 12th | 34th | Various types of joins, subquery | 23rd(G1) | Revision of Exercise on Grant, Revoke, Commit and Rollback |
| | 35th | Aggregate functions , Challenges of My Sql | 24th(G2) | Revision of Exercise on Grant, Revoke, Commit and Rollback |
| | 36th | Introduction to Big Data | | |
| 13th | 37th | Understanding Big data with samples | 25th(G1) | Design of Database for any application |
| | 38th | Revision of Unit 1 | 26th(G2) | Design of Database for any application |
| | 39TH | Revision of Unit 2 | | |
| 14th | 40th | Revision of Unit 3 | 27th(G1) | Viva of practical no. 1 to 3 |
| | 41th | Revision of Unit 4 | 28 th (G2) | Viva of practical no. 1 to 3 |
| | 42nd | Revision of Unit 5 | | |
| 15th | 43rd | Revision of Unit 6 | 29th(G1) | Viva of practical no. 4 to 7 |
| | 44th | Revision of Unit 7 | 30 th (G2) | Viva of practical no. 4 to 7 |
| | 45th | Pre Exam Conduct | | |