SANATAN DHARMA COLLEGE, AMBALA CANTT
College with Potential for Excellence, UGC,New Delhi
NAAC Accredited Grade "A+" with CGPA 3.51 in 3rd cycle
ISO 9001:2015 & ISO 14001:2015 Certified

Department of Computer Science
Lesson Plan (Session 2022-2023)

Class: B.Com CAV   **Sem: III**   **Course Code:** BC (Voc)-306   **Nomenclature:** Fundamentals of Database Management System

Duration: 16 Weeks   **Dates: 5 Sep,2022- 25 Dec, 2022**

SYLLABUS

BC (Voc)-306
FUNDAMENTALS OF DATABASE MANAGEMENT SYSTEM

Max. Marks: 60
Internal Assessment: 20
Time: 3 Hours

Note: **Paper setter will set nine questions in all. Question No. 1 comprising of five short types questions carrying four (4) marks each is compulsory. It covers the entire syllabus. Answer to each question should not be more than one page. Candidate is required to attempt four questions from the remaining eight questions carrying 10 marks each.**

Overview of Data Management System: element of data-base system, DBMS and its architecture, advantages of DBMS, types of database users, role of database administrator.

Brief overview of hierarchical and network model, detailed study of relational model (relations, properties of relational model, keys and integrity rules), and E-R diagrams.

Normalization: concepts and update anomalies, functional and transitive dependencies normal forms (1NF, 2NF, 3NF and BCNF).

Database objects: terminologies- tables, views, materialized views, indexes; triggers; synonyms; functions, procedures and packages; create operator, create directory, create library, database links.

SQL: methods to access SQL plan; DDL, describe command; DML, joining tables; break clause.

Oracle service: terminology; architecture and background support processes, role of database administrator, applications of ORACLE in business.

Practical: The candidates should be able to work on Oracle

REFERENCES

- C.J. Date, An Introductions to Data Base System Narosa Publisher.
- D. Kroenke: Database Processing: Fundamental Design and Implementation, Pearson.
- Abraham Silberschatz, Henry F Korth and S. Sudarshan, Database System Concepts, McGraw Hill Education.

Course Outcomes

After the completion of this course, prospective Computer professionals will have the ability to

CO No.	Course Outcome
1.	Elucidation of Database system architecture and corresponding operations.
2.	Introducing the relational approach and special relational operations
3.	Student will learn the Embedded SQL in detail.
4.	Introducing the Hierarchical Approach and E-R diagrams.
5.	To give a detailed note on Network approaches.
6.	Introducing Oracle service: terminology and architecture; the applications of ORACLE in business.

S.No	Instructional Technique	Assessment Methods (AM)
1	Chalk & Talk	**Assignments**
2	ICT tools	**Quiz**
3	Group discussions	**Group Discussions**
4	Industrial visit	**Oral Tests**
5	Case studies	**Sessional**
6	Small Projects	**Presentations**
7	Workshop	**Seminar**
8	Spoken Tutorials	**University Exams**
9	Flipped Class	
10.	**E-Resources**	

Detailed Lesson Plan Sec-A

Week	Date	Topic to be Covered	Instructional Technique	Assessment Method
1	8- Sep-22	Overview of Data Management System	2-(PPT/Projector)	----
	9- Sep-22	element of data-base system	2(PPT/Projector)	1
	10-Sep-22	DBMS and its architecture	1	1
2	15-Sep-22	Advantages of DBMS	1	1,2,3,4
	16-Sep-22	Types of database users	2-(PPT/Projector)	1,2,3,4
	17-Sep-22	Role of database administrator	2-(PPT/Projector)	1,2,3,4
3	22-Sep-22	Overview of hierarchical and network model	2-(PPT/Projector)	1,2,3,4
	23-Sep-22	Holiday		
	24-Sep-22	hierarchical model	2-(PPT/Projector)	1,2,3,4
4	29-Sept-22	hierarchical and network model	--	---
	30-Sept-22	detailed study of relational model (relations, properties of relational model, keys and integrity rules)	2-(PPT/Projector)	1,2,3,4
	1-Oct-22	detailed study of relational model (relations, properties of relational model, keys and integrity rules)	2-(PPT/Projector)	1,2,3,4
5	6-Oct-22	**Assignment -1**		
	7-Oct-22	E-R diagrams	2-(PPT/Projector)	1,2,3,4
	8-Oct-22	Normalization: concepts and update anomalies	2-(PPT/Projector)	1,2,3,4
6	13-Oct-22	Holiday	---	
	14-Oct-22	functional and transitive dependencies	9	1,2,3,4,6
	15-Oct-22	normal forms -1NF	8,10,2	1,2,3,4,
7	20-Oct-22	normal forms- (2NF)	8,10,2	1,2,3,4,
	21-Oct-22	normal forms (3NF)	6	1,2,3,4
	22-Oct-22 to 26-Oct-22	Diwali Vacation		
8	27-Oct-22	BCNF	2-(PPT/Projector)	1,2,3,4
	28-Oct-22	Anomalies of different Normal Forms		
	29-Oct-22	Database objects: terminologies	2-(PPT/Projector)	1,2,3,4
9	3-Nov-22	tables, views	2-(PPT/Projector)	1,2,3,4
	4-Nov-22	materialized views, indexes;		
	5-Nov-22	triggers; synonyms; functions,	2-(PPT/Projector)	1,2,3,4
10	10-Nov-22	procedures and packages;	2-(PPT/Projector)	1,2,3,4
	11-Nov-22	**Assignment-2**		
	12-Nov-22	create operator, create directory.	6	1,2,3,4

11	17-Nov-22	create library, database links	--	**5**
	18-Nov-22	**Revision**		
	19-Nov-22	**Sessional**		
12	24-Nov-22	SQL: methods to access SQL plan	**6**	**1,2,3,4**
	25-Nov-22	DDL, describe command; DML	**2-(PPT/Projector)**	**1,2,3,4**
	26-Nov-22	joining tables; break clause.	**6**	**1,2,3,4**
13	1-Dec-22	Oracle service: terminology	**2-(PPT/Projector)**	**1,2,3,4**
	2-Dec-22	Oracle architecture and background support processes	**9,10**	**1,2,3,4**
	3-Dec-22	role of database administrator	**9,10**	**1,2,3,4**
14	8-Dec-22	Revision		
	9-Dec-22	Revision		
	10-Dec-22	Class Test		
15	15-Dec-22	Oracle doubts	**6**	**1,2,3,4**
	16-Dec-22	applications of ORACLE in business	**2-(PPT/Projector)**	**1,2,3,4**
	17-Dec-22	Doubts		
16	22-Dec-22	Oracle	--	--
	23-Dec-22	Revision	--	--
	24-Dec-22	Revision		