Bachelor of Computer Applications (Semester – III)

Syllabus for the Students admitted in Session 2019-20

Paper – II: DATABASE MANAGEMENT SYSTEM

Time: 3 Hours **M. Marks: 75**

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A

Introduction to Data, Field, Record, File, Database, Database management system. Structure of database system, Advantage and disadvantage, levels of database system, Relational model, hierarchical model, network model, comparison of these models, E–R diagram, different keys used in a relational system, SQL.

Section B

DBA, responsibilities of DBA, Relational form like INF, 2NF, 3NF, BCNF, 4^{th} NF, 5^{th} NF, DBTG, concurrency control and its management, protection, security, recovery of database.

Section C

SQL: Introduction to SQL–DDL, DML, DCL, Join methods & sub query, Union Intersection, Minus, Built in Functions, Views, Security amongst users, Sequences, Indexing Cursors– Implicit & Explicit, Functions & Packages Database Triggers.

Section D

Big Data: Introduction to Big Data and Analytics, Introduction to NoSQL

Books and References:

1. Introduction to Database System by C.J. Date.
2. Database Management System by B.C. Desai.
3. Database Concept by Korth.
4. Simplified Approach to DBMS– Kalyani Publishers
5. Oracle – Developer – 2000 by Ivan Bayross.
6. Database System Concepts & Oracle (SQL/PLSQ) – AP Publishers.
7. https://www.mongodb.com/nosql-explained
8. Introduction to NoSQL (Ebook), NoSQL Seminar 2012 @ TUT, Arto Salminen