

K.D.K. College of Engineering, Nagpur
 Department of Information Technology
Question Bank based on Unit-3 & 4 (CO603.3.CO603.4)
 VI SEM B.E. (IT) (CBS)

Database Management System (BEIT603T)

Date: 20-02-2019

603T.1 Understand & Apply basic concept of database system , DBMS, its architecture ,formal relational query languages and also the problems of traditional file system and use of database management system (DBMS) to ov

(BTL indicates Blooms Taxonomy level 1 Remember, 2 Understand, 3 Apply ,4 Analyze, 5 Evaluate, 6 Create)

Q. No.	Questions	BTL
1.	What is an attribute? Explain different types of attributes.	BTL-2
2.	Explain ER diagram and its notation.	BTL-2
3.	What are strong entities and weak entities? Draw an ER diagram illustrating the use of strong entity, weak entity, composite attribute, multivalued attributes & derived attributes	BTL-2
4.	Explain E.F Codd's relational database rules.	BTL-2
5.	Explain the terms with example : i) Cardinality ii) Entity iii) Relationship iv) Participation Constraint	BTL-2
6.	List various E-R diagram notations and Explain meaning associated with each notation.	
7.	Draw an ER diagram for manufacturing company which records information about the projects it has on hand, the parts parts used in the projects, the suppliers who supply the parts, the warehouse in which those parts are stored, the employees who work on these projects	BTL-3
8.	Consider the relation R (A, B, C, D, E) with following dependencies:- $AB \twoheadrightarrow C$, $CD \twoheadrightarrow E$, $B \twoheadrightarrow D$ Is AB or ABD a candidate key of the relation? Explain answer with proper Justification	BTL-3
9.	What is normalization and why is it needed? Explain the process in detail. Also explain 1NF, 2NF and 3NF with suitable example.	BTL-2
10.	Explain in detail, query interpretation. Explain the steps involved in processing a query. With neat diagram	BTL-2
11.	Discuss the selection operation in query processing.	BTL-2
12.	How the expression can be evaluated with help of materialization and pipelining approach?	BTL-2
13.	Explain Query optimization in detail.	BTL2
14.	Let relation r1 (A, B, C) and r2 (C, D, E) have the following properties : r1 has 10,000 tuples ,r2 has 5,000 tuples Estimate the number of block accesses required, using each of the following join strategies for $r1 \bowtie r2$. i) Nested loop join ii) Block nested loop join iii) Merge join iv) Hash join	BTL4

Dr. (Mrs.) S. P. Khandait