B.M.S COLLEGE OF ENGINEERING, BANGALORE-19
(Autonomous Institute, Affiliated to VTU)
Computer Science & Engineering

INTERNALS-1

Course Code: 19CS4PCDBM	**Course Title: Database Management Systems**	
Semester: 4	**Maximum Marks: 40**	**Date: 09-07-2022**
Faculty Handling the Course:	Dr. KVN, Dr. SKS, Prof. VBM, Dr. MDR	
Instructions: ***Internal choice is provided in Part C.***		

PART-A

Total 5 Marks (No Choice)[CO1-PO1]

No.	Question	Marks
1	List and explain the advantages of using database approach.	**5**

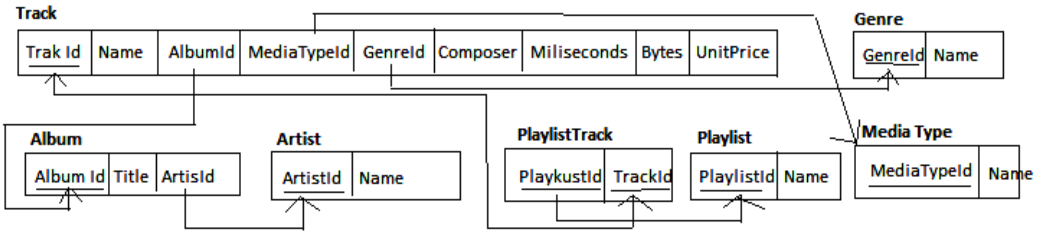
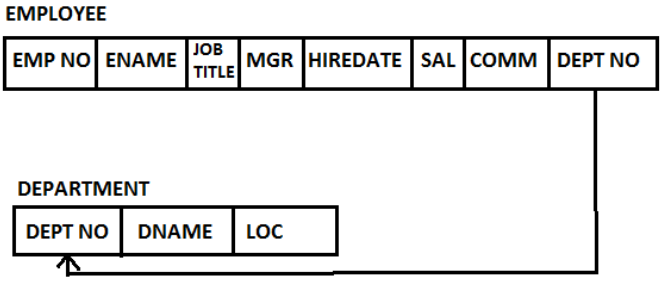
PART-B

Total 15 Marks (No Choice)[CO2-PO2]

No.	Question	Marks
2a	Analyze the below given requirement and write a SQL assertion statement. The minimum price charged for products made by ABC Company should be Rs.20/- Tables are: Product(name, manufacture) sells(prod_name, price)	**5**
2b	Analyze the below given SQL query and rewrite **1st query using *nested/sub queries*** and **2nd query using *correlated query***. 1. Query to list down the movie titles directed by Manirathnam: SELECT movie_title FROM movie_director m, person p WHERE m.pid = p.pid and p.name='Manirathnam'; 2. Find the names of publishers who have published CSE books: SELECT pub_name FROM publisher p, titles t WHERE p.p_id=t.pid AND t.type='CSE';	**5**
2c	Analyze and complete the SQL query given below to create a View dept_salary to have minimum salary, maximum salary and Average Salary for each department. Faculty: F_ID | F_name | Dnum | Email_ID | Salary Department: Dname | Dnumber CREATE OR _____ dept_salary (_____) AS SELECT _____ FROM EMPLOYEE e, DEPARTMENT d WHERE _____ _____;	**5**

PART- C

Total 20 Marks (Choice between question 3a & 3b, choice between question 4a & 4b)[CO3-PO3]

No.	Question	Mark
3a	Given the following database design, write a SQL query for the following:  A. List the names of an artist's who did not make any albums at all. B. List the artists name who did not record any tracks of the Latin genre. C. Display the trackid and track name of the video track which has the longest length. D. Display the space, in bytes, occupied by the playlist "Grunge", and also the price of it (Assume that the price of a playlist is the sum of the price of its constituent tracks).	**10**
	OR	
3b	Write the SQL query for the below given database design:  A. List the details of the employees in ascending order of the department number and descending of jobs. B. List the name employee name who joined on 1-MAY-21,3-DEC-21,17-DEC-98,19-JAN-20 in ascending order of their seniority. C. List the details of the employees whose salaries are more than the employee SHYAM. D. List the employee name along with department name and Location of all the employees working under 'ACCOUNTING' & 'RESEARCH' order of Department number. E. List the employees who are senior to RAJ working at BANGALORE & MYSORE location.	**10**
4a	Write ER diagram for the following requirements (capture all the relationship constraints in the diagram): a) Customers (Cust-#) are categorized in account groups: A customer belongs to one account group (AGroup-#) only, while an account group may contain several customers. b) A customer may belong to several sales organisations (SalesOrg-#). Each sales organisation is linked to one or more distribution channels (DC-#). c) Each distribution channel is assigned to one or more divisions. d) Each customer has at least one address, e) and may operate with one or more international Trade.	**10**
	OR	
4b	Design an ER diagram for the following requirements (capture all the constraints and relationships in the diagram) A Group has several companies and each company is identified by a company id, whereas a company belongs to one group. Its required to store group details like group name, start date, members belonging to the group. Similarly, needs to store the company details like company id, company name, location, address, contact details. Companies are connected by a hierarchical structure; each subsidiary is assigned to exactly one company of the next higher hierarchy level, the parent company. Each company has several plants and each plant is identified uniquely with PlantID; a plant belongs to one company only. A plant produces many items and each item is recognised by Item#. An item is only produced in one of the plants.	**10**

*****ALL THE BEST *****