DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PUDCUHERRY TECHNOLOGICAL UNIVERSITY

Continuous Internal Assessment Test II Question paper

Bachelor of Technology(Computer Science and Engineering)

II Year IV Semester CS210 DATABASE MANAGEMENT SYSTEMS held on 07.04.2025

Time: 1.5 Hours **Answer ALL Questions** **Maximum:25 Marks**

PART – A (2x5=10 marks) ANSWER ANY 5 QUESTIONS

*questions are to be answered compulsorily

Sl.no.	Question	Marks	Course Outcomes (C01/C02/C03/C04/C05/ Combinations)	Blooms Taxonomy levels
01	If relations are not normalized will there be any consequences ? Justify your answer.	2	CO2	L1,L2
02	Define Armstrong axioms.	2	CO2	L2
03*	**Illustrate spurious tuples with an example and when are spurious tuples generated?**	2	CO2	L3
04	Differentiate between indexing and hashing?	2	CO4	L2
05	How are queries processed by a query processor?	2	CO4	L2
06	Without normalizing the tables the tables may suffer from certain anamolies? What are they illustrate with an example	2	CO2	L3
07	How do you test for INF,2NF constraints on the relation R?	2	C02	L2

PART – B either Q1 or Q2 question compulsorily and any two from Q3,Q4,Q5 (15marks)

Sl.no.	Question	Marks	Course Outcomes (C01/C02/C03/C04/C05/ Combinations)	Blooms Taxonmy levels
01	Write MYSQL queries for the following	5	CO2	L4
	1. Design an information system for the movies information system. **Movie =[movie id,movie-name,genre,language,release date,released countries,movie rating]** **Cast =[actor /actress details]** **Technical Crew details [editor,director,cinematographers]** **An actor may be a director,musician,lyricist etc** 1. List number the movies acted by 'rajinikanth' with 'kushboo' which was released from 2010 to 2018 along with movie names 2. List the movies directed by vettrimaran which has won national award and also collected about 50 crores. 3. List the movies that falls under the category of thriller and it is being directed by david fincher and released in the 2010 decade 4. List the editor has who has worked on the movies whose duration is less than 2.30 hrs in the last three years and acted by 'jennifer anniston'			

2	Consider the following relational database schema consisting of the four relation schemas: passenger (pid, pname, pgender, pcity) agency (aid, aname, acity) flight (fid, fdate, time, src, dest) booking (pid, aid, fid, fdate) Answer the following questions using relational algebra queries; 1. Get the complete details of all flights to New Delhi. 2. Find only the flight numbers for passenger with pid 123 for flights to Chennai before 06/11/2020. 3. Find only the flight numbers for passenger with pid 123 for flights to Chennai before 06/11/2020. 4. Find the details of all male passengers who are associated with Jet agency. 5. Get the details of flights that are scheduled on both dates 01/12/2020 and 02/12/2020 at 16:00 hours.	5	CO1	L3,L4
03	Consider a relation *R(A,B,C,D,E),* with the functional dependencies- *F={A->BC, CD->E, B->D, E->A)* $A \rightarrow BC$ $CD \rightarrow E$ $B \rightarrow D$ $E \rightarrow A$ Find closure of the attributes A+ and CD+	5	CO2	L3,L4
04	Given the following relation **STUDENT_COURSE**: StudentID | StudentName | CourseID | CourseName | Instructor S1 | Alice | C1 | Math | Dr. Brown S2 | Bob | C2 | Physics | Dr. Smith S1 | Alice | C2 | Physics | Dr. Smith S3 | Charlie | C1 | Math | Dr. Brown Identify **the functional dependencies and implied functional dependencies. If the relation has to decomposed how will decompose it.**	5	CO2	L3,l4
05	From the following set of four functional dependencies, derive (a), (b), and (c) 1. A -> B 2. C-> B 3. D-> ABC 4. AC->D Check whether the following functional dependencies could be derived from the given functional dependencies. If could be write the rules through which it was derived D-> ABCD AC->BD AC->ABCD	5	CO2	L3,l4