

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc(SS) DEGREE EXAMINATION DECEMBER 2024
(Third Semester)**

Branch - SOFTWARE SYSTEMS(Five Years Integrated)

DATABASE MANAGEMENT SYSTEM CONCEPTS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	The database definition or descriptive information is a) Beta – data b) Meta – data c) Alpha – data d) Data– description	K1	CO1
	2	The data in the database at a particular moment in time is called a) Instances b)Events c) Schemas d) Moments	K2	CO2
2	3	If every record in the file has exactly the same size (in bytes), the file is a) Same-size records b) Equal records c) fixed-length records d) constant size records	K1	CO2
	4	A candidate key that is chosen by the database designer as the principal means of identifying tuples uniquely is called a) Primary key b) Foreign key c) Reference key d) Super key	K2	CO1
3	5	The main SQL command for data definition is the a) SELECT statement b) DROP statement c) ALTER statement d) CREATE statement	K1	CO1
	6	Any such relation that is not part of the logical model, but is made visible to a user as a virtual relation, is called a) Procedure b) view c) Function d) Transaction	K2	CO2
4	7	Which one allows us to express constraints that uniquely identify the values of certain attributes? a) Normal forms b) Views c) Functional dependencies d) Super key	K1	CO2
	8	Which normal form allowing certain nontrivial functional dependencies whose left side is not a superkey? a) First b) Third c)Fourth d) Fifth	K2	CO2
5	9	Select the property of all actions of a transaction be executed completely, or, in case of some failure, partial effects of each incomplete transaction be undone. a) Durability b) Serializability c) Atomicity d) Isolation	K1	CO1
	10	To reduce the overhead of time consuming process of search and recovery we use a) Lock technique b) Checkpoints c) Test methods d) Validate techniques	K2	CO2

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Specify the purpose of database system.	K4	CO4
	(OR)			
	11.b.	Categorize the different types data models.		
2	12.a.	Inspect the access method of sequential files.	K3	CO4
	(OR)			
	12.b.	Present the basics of network model and hierarchical data model.		
3	13.a.	Demonstrate how the SQL commands used to define the databases.	K4	CO4
	(OR)			
	13.b.	Illustrate the creation of Functions in SQL.		
4	14.a.	Narrate the normal forms based on primary key.	K5	CO4
	(OR)			
	14.b.	Verify the fourth normal form in database design.		
5	15.a.	Demonstrate a simple transaction model with ACID properties.	K4	CO4
	(OR)			
	15.b.	Classify various failures that occur in system.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Appraise the characteristics of database approach over file processing approach.	K4	CO5
2	17	Summarize the various operations performed on Files.	K3	CO4
3	18	Analyze the creation and usage of Views in SQL.	K5	CO5
4	19	Illustrate the Boyce-Codd normal form with example.	K6	CO5
5	20	Enumerate two phases after the recovery of system crash in detail.	K5	CO4

Z-Z-Z

END