## 2025

## COMPUTER SCIENCE (Theory)

Full Marks=70

Pass Marks = 21

Time: Three Hours

All the questions are compulsory

The figures in the right margin indicate full marks for the questions.

Select the correct answer from each of the following and rewrite it.

1. In seek () method the reference point for the current position of the file is

A) 0 B) 1
C) 2 D) 3

				생물이 살이 그 없어. 열차가 하는 것이 없는 사람들이 가장 얼마나 없는 것이 없다.
	A)	0	B)	1
	C)	2	D)	3
2.	The li	st should be sorted first in		
	A)	Stack	B)	Queue
	C)	Linear search	D)	Binary search 1
3.	The s	tatement in SQL that delete	es the t	able and the relationship is
	A)	REVOKE	B)	DROP
	C)	DELETE	D)	TRUNCATE 1

Tavi	ew the structure of an alre	eady cr	eated table by using	
	DESCRIBE TABLE	B)	ALTER TABLE	
		D)	CREATE TABLE	1
	is not an a	ggrega	ite function.	
		B)	COUNT	
C)	COMPUTE	D)	SUM	1
Whi	ch software prevents the	unauth	orized access to a system	
	Firewall	B)	Gateway	
	Router	D)	Virus checker	1
,	term FTP stands for			
A)	File Transfer Program	B)		
C)			File Transfer Protection	1
. (	Give the very short answe	er of th	e following questions:	
Wh	at is an exception in pytho	n progr	ramming?	1
Wh	ich data structure follow F	IFO pr	inciple?	1
Giv	e one advantage of binary	search	over linear search.	1.00
				1
그림 구매 이 이 이 이렇게 이렇게 되었다. 그런 그렇게 되는 그 이렇게 되었다. 그리고 하는 그리고 하는 그리고 하는 것이 없는 것이다. 그렇게 되었다.			1	
Name the operator used for pattern matching in SQL,  Write the statement which is used to make changes in the structure of a table.			_	
Giv	ve the output produced by	the foll	owing SQL statement	
S	ELECT MID ("MANIPU	R", 3, 4	4);	1
Wł	Why constraints are used in creating table?			
Mention one disadvantage of optical fibre.			1	
Csc (T	r) 24/Im/25	2		Contd.
	A) C) In So A) C) Whi A) C) The A) C) Wh Wh Giv Def Nat Wr a ta Giv M M E	A) DESCRIBE TABLE  C) VIEW TABLE  In SQL is not an analysis at able.  A) MAX  C) COMPUTE  Which software prevents the analysis and software prevents the analysis at able.  C) Router  The term FTP stands for  A) File Transfer Program  C) File Transfer Protocol  Give the very short answer  What is an exception in python  Which data structure follow F  Give one advantage of binary Define DBMS.  Name the operator used for power of the statement which is a table.  Give the output produced by SELECT MID ("MANIPUT Why constraints are used in a state of the statement which is a table.	A) DESCRIBE TABLE B) C) VIEW TABLE D) In SQL is not an aggregated A) MAX B) C) COMPUTE D) Which software prevents the unauthor A) Firewall B) C) Router D) The term FTP stands for A) File Transfer Program B) C) File Transfer Protocol D) Give the very short answer of the What is an exception in python program Which data structure follow FIFO programs B) Give one advantage of binary search Define DBMS. Name the operator used for pattern range Write the statement which is used to a table. Give the output produced by the follow SELECT MID ("MANIPUR", 3, 4) Why constraints are used in creating Mention one disadvantage of optical	C) VIEWTABLE D) CREATE TABLE  In SQL is not an aggregate function.  A) MAX B) COUNT  C) COMPUTE D) SUM  Which software prevents the unauthorized access to a system  A) Firewall B) Gateway  C) Router D) Virus checker  The term FTP stands for  A) File Transfer Program B) File Transmission Protocol  C) File Transfer Protocol D) File Transfer Protection  Give the very short answer of the following questions:  What is an exception in python programming?  Which data structure follow FIFO principle?  Give one advantage of binary search over linear search.  Define DBMS.  Name the operator used for pattern matching in SQL,  Write the statement which is used to make changes in the structura table.  Give the output produced by the following SQL statement  SELECT MID ("MANIPUR", 3, 4);  Why constraints are used in creating table?  Mention one disadvantage of optical fibre.

17.	Two universities in different states want to transfer information.  Which type of network they need to use for this?  Give short answer of the following questions:	1
18.	What is the need for exception handling? State the use of raise	2
19.	Give the advantage of using with clause to open a file. Write the	
	python code to open a file called "file1.txt" in read mode by using with clause.	2
20.	Evaluate the following postfix expression	2
21.	20, 8, 4, /, 2, 5, +, *, - Define the following terms:	2
	i) Attribute ii) Cardinality	
22. 23.	Differentiate between ORDER BY clause and GROUP BY clause in SQL. Write the use of UNION and INTERSECT operations on relations.	2
24.	Give the full form of ARPANET. What are the types of data communication?	2
25.	Explain the working of a modem.	2
26.	Draw the network layout of BUS and RING topologies connecting 4 computers.	2
	Give answer of the following questions:	
27.	<ul> <li>a) i) Define a stack</li> <li>ii) Under what conditions the 'overflow' and 'underflow' can occur in a stack.</li> </ul>	3

	b) i) Define a deque.	
	ii) What are the operations performed on deque?	
28.	Convert the following infix into prefix and postfix form.	
	A * (B+C) - D/E	3
	Or	
	Sort the following numbers manually by using Insertion Sort manually	ethod.
	18 12 46 38 10 24 15	
29.	Write an algorithm for Linear Search.	3
2).	Or	
	Write an algorithm for Selection Sort.	
	Witte an angerman for Beredien Bott.	
30.	Explain the types of data with examples.	3
	Or	
	What are the limitations of a file system?	
31.	a) Give the syntax	
	i) to add primary key to a relation.	
	ii) to add an attribute to an existing table.	
	iii) to remove an attribute from a table.	3
	Or	
	b) How you update and delete data from a table giving with ex	amples
	Give answer of the following questions:	anpies.
32.	Write a python program to implement a stack.	5
	Or	
	Write a python program to implement a queue.	
22.4		
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Contd.

33.	Search method.
	Or Write a python program to sort a list of numbers in ascending order using Bubble Sort method.
34.	a) i) What is data model? ii) Write the role of Primary and Foreign key in database. iii) Write some uses of database in real life application.  Or  Or
	<ul> <li>b) Consider a table EMPLOYEE containing fields ENO, ENAME, DEPT, AGE, SEX and SALARY. Write the SQL commands</li> <li>i) To list all the employee of education department whose salary</li> </ul>
	<ul> <li>is more than 30000.</li> <li>ii) To display ENAME, DEPT, AGE whose age is between 30 and 40.</li> <li>iii) To count the number of employee whose name starts with 'S' or ends with 'A'.</li> </ul>
	<ul><li>iv) To sum the total salary for all female employees.</li><li>v) To display ENAME, SALARY in descending order of salary.</li></ul>
35.	a) i) What is computer network? ii) Differentiate between LAN and WAN. iii) Write short notes on Repeater.  Or
	<ul> <li>b) i) Write the full form of Wi-Fi.</li> <li>ii) Why do we need protocols in data communication? Name the protocol for e-mail services.</li> <li>iii) Write some of the common distribution channels of malware.</li> </ul>
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