2 SEM TDC GECS (CBCS) 2 (A/B/C)

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(May/June)

COMPUTER SCIENCE

(Generic Elective)

Paper : GE–2

Full Marks : 53
Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Paper : GE–2 (A)

(Introduction to Database System)

1. Answer the following questions briefly : 2×5=10

   (a) Define DBMS. How many types of DBMS structure are there?

   (b) Define Relational Data Model.

   (c) What is Data Definition Language?

   (d) Define schema of Database Table.

   (e) Define RDBS.

(*Turn Over*)

2. Answer the following questions (any *two*) :

5×2=10

(a) Explain about the normalization in ER model concept.

(b) Discuss DBMS Architecture.

(c) Compare between DDL, DML, DCL.

3. Draw an ER diagram for attendance management system of a school. 10

4. Write the SQL commands to perform the given tasks : 10

(a) Create a database named as Employee.

(b) Create a table named as Emp_entry having attributes :

(i) emp_id type : INT

(ii) emp_name type : VARCHAR

(iii) address type : VARCHAR

(iv) email type : VARCHAR

(v) phone type : VARCHAR

(c) Insert at least 5 records in the table Emp_entry.

(d) Display the names of the employees whose address is Tinsukia.

(e) Display the data stored in the table Emp_entry.

(f) Delete the record of the employee whose emp_id is '1'.

5. Explain the concept of functional dependencies in DBMS. 7

6. Explain the concept of three-schema architecture of DBMS with proper diagram. 6

Paper : GE–2 (B)

(**Introduction to Programming**)

1. Answer the following questions : 1×7=7

(a) What is keyword in C?

(b) What is '\n'?

(c) What is pointer?

(d) What is an array?

(e) What is the meaning of '%f' in C?

(f) What is type casting?

(g) Write the syntax of 'for' loop.

2. Answer any *eight* of the following questions :

2×8=16

(a) What are access specifies? Explain.

(b) What are the differences between "a" and 'a'?

(c) Differentiate between constructor and destructor in C++.

(d) Differentiate between call by value and call by reference.

(e) What is the use of continue statement? Give example.

(f) What is class in C++?

(g) What is the use of 'iostream.h' in C++?

(h) State any two string functions with their uses.

(i) Define structure and write the syntax of structure declaration.

(j) What is the use of an fopen and an fclose in file handling?

(Continued)

3. Answer any *five* of the following questions :

6×5=30

(a) State the series of steps for executing a program written in C.

(b) Define array. How is two-dimensional array initialized?

(c) Write a C program to find the biggest number in an array.

(d) Write a C program to check whether an alphabet is vowel or not using switch case.

(e) Write a C++ program to find the sum of digits in a given number.

(f) Write a C++ program to demonstrate function overloading.

(g) Explain in brief the concept of recursion. Give example.

Paper : GE–2 (C)

(Computer Network and Internet Technology)

1. Answer the following questions :   2×5=10

(a) Define computer networks.

(b) What is Internet Protocol? How many types of IP are there?

(Turn Over)

(c) Define web server.

(d) Define Peer-to-Peer Network.

(e) How does data communication work in computer network?

2. Answer the following questions (any *two*) :

5×2=10

(a) Define data transmission. Explain its types.

(b) Differentiate between guided and unguided media.

(c) What are events in JavaScript? Elaborate it.

3. Design an HTML page for creating a feedback form having the following fields :   - 10

(a) Title

(b) Description

(c) Name

(d) Address

(e) Phone

(f) Email

Use cascading style sheet to give the form design.

4. Explain the different layers of OSI model with a neat diagram.   8

5. Explain the client-server model.   8

6. Write a JavaScript program to find the current date and display it in a form using HTML.   7

Or

Write a JavaScript program to find the greatest number among the three given numbers.

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