

Total No. of Printed Pages—7

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

2 0 2 2

(June/July)

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 : $2 \times 5 = 10$

- (a) Define tuple.
- (b) State the use of SQL.
- (c) What is a relation?
- (d) Define composite key.
- (e) What is schema?

(2)

2. (a) Compare primary key with composite key. 3

Or

- (b) Why is Foreign key used? 3

3. Answer any *five* of the following questions :
8×5=40

(a) Explain the components of an E-R diagram.

(b) Explain the concept of three-schema architecture with a proper diagram.

(c) Explain the concept of functional dependencies.

(d) Explain briefly about normalization along with its advantages.

(e) Explain aggregate functions of SQL.

(f) Explain the data types of SQL.

(g) Draw an E-R diagram for a Library Management System.

(3)

Paper : GE-2 (B)

(Introduction to Programming)

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

(a) What is variable in C?

(b) Write the syntax of 'while' loop.

(c) What is an array?

(d) What is an object in C++?

(e) What is string in C?

(f) What is data type?

(g) What is the use of getch() function?

2. Answer any *eight* of the following questions :
2×8=16

(a) Differentiate between C and C++.

(b) What is the use of 'iostream' in C++?

(c) Name any two properties of an object.

(d) What is the difference between strcat() andstrupr() functions?

(e) What is the need of fopen() function?

(4)

- (f) Mention the two uses of malloc() function.
- (g) Mention any two advantages of pointer.
- (h) What is the use of get() in C++?
- (i) What is macro in C++?
- (j) What is the use of 'math.h'?

3. Answer any five of the following questions :

6×5=30

- (a) Write a C program to find whether a given number is divisible by 5 or not.
- (b) Explain briefly the characteristics of object-oriented programming.
- (c) Write a C++ program to find the sum of even integers from 1 to 50.
- (d) Write a C program to print odd numbers below 10.
- (e) Write a C program to find the simple interest.
- (f) Differentiate between defining and declaring a function with example.

(5)

Paper : GE-2 (C)

(Computer Network and Internet Technology)

1. Answer the following as directed : 1×5=5

(a) What is extranet?

(b) ISP stands for _____.

(Fill in the blank)

(c) Write one advantage of bus topology.

(d) What is the use of <sub> tag in HTML?

(e) What is URL?

2. (a) Explain different components involved in data communication. 5

Or

What is client-server model? Explain in brief. 5

(b) Differentiate between Internet and Intranet. 3

3. (a) Explain different layers of OSI model with a neat diagram. 8

Or

What is transmission media? Explain any two types of guided media in short.

2+6=8

(6)

(b) Define any *two* of the following : $2 \times 2 = 4$

(i) Gateway

(ii) NIC

(iii) Tree topology

4. (a) What is search engine? Briefly explain how search engine works. $1 + 3 = 4$

(b) Write on any *two* of the following in short : $3 \times 2 = 6$

(i) FTP

(ii) Telnet

(iii) M-commerce

5. (a) Which tag is used to add hyperlink in HTML document? Explain with example. 3

(b) What is CSS? Explain how different types of CSS are added with HTML program with example. 6

Or

Write an HTML program to generate the following design : 6

<i>Student Record</i>		
<i>Class</i>	<i>Male</i>	<i>Female</i>
1st Semester	15	15
3rd Semester	16	14
5th Semester	20	10

(7)

6. (a) How are variables declared in JavaScript? Give example. 2

(b) Write a JavaScript program to search a date in DD/MM/YYYY format within a string. 7

Or

What is a scripting language? Briefly explain how external JavaScript is created using example code. $2 + 5 = 7$
