

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 20410

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2022.

Second Semester

Computer Science and Engineering

CS 8251 — PROGRAMMING IN C

(Common to : Computer and Communication Engineering/Information Technology)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Show the use of ternary or conditional operator.
2. Write a code to find maximum of three numbers.
3. Distinguish between one dimensional and two dimensional arrays.
4. List out the any four functions that are performed on character strings.
5. What is function prototype?
6. Mention the advantage of pass by reference.
7. What is the difference between enum and macro?
8. Give example for nested structure.
9. How can a variable be accessed from another file?
10. Differentiate sequential access and random access.

PART B — (5 × 16 = 80 marks)

11. (a) Develop a C program for the following:
- (i) To check whether a number is prime or not. (8)
 - (ii) To convert the temperature given in Fahrenheit to Celsius and vice versa. (8)

Or

- (b) Explain in detail the operation of various looping statements in C with suitable examples. (16)
12. (a) (i) What are the different types of string function? Describe with their purpose. (8)
- (ii) Write the C program to find the number of Vowels, Constants, Digits and white space in a string. (8)

Or

- (b) (i) Write a C program to multiply two 3×3 matrices. (8)
- (ii) Develop a C program to search an element from the array. (8)
13. (a) Develop a C program for binary search using recursive function. (16)

Or

- (b) (i) Illustrate the C coding for swapping of two numbers using pass by reference. (8)
- (ii) Write a C program to check whether the input string is Palindrome or not. (8)
14. (a) Define a structure called student that would contain name, regno and marks of five subjects and percentage. Write a program to read the details of name, regno and marks of five subjects for 30 students, calculate the percentage and display the name, regno, marks of the subjects and percentage of each student. (16)

Or

- (b) (i) Explain about various functions used for dynamic memory allocation. (8)
- (ii) Create enum of week days. Write a program in C, use this enum and display it. (8)

15. (a) Explain the concept of sequential file access. Also write a program to find average of numbers sorted in sequential access file. (16)

Or

- (b) Explain the concept of random file access. Also write a program on transaction processing system using random access file. (16)